Outcome Evaluation Of The Mulyavardhan Programme: A Quasi-Experimental Study

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Prepared for
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Preface and Acknowledgements

It is now more than three years since Mulyavardhan started operating in Zilla Parishad schools in Beed, Maharashtra. Over these three years, the curriculum has been strengthened in the light of experience and feedback from the schools and suggestions from experts. The in-house teacher training team has also improved the MV teacher training. Assessment of induction and in-service training found that they it has benefitted teachers and their curriculum delivery immensely.

Aligning with the field conditions, mobile technology was used for smooth communication between Mulyavardhan teachers, block heads, tehsil heads and the implementation officials at the Head Office. All the inputs are collated and analyzed for feedback using specially developed software.

Encouraged by an impact assessment conducted by the Cambridge University Technical Services, which showed positive responses from all stakeholders, Bharatiya Jain Sanghatana decided to conduct outcome evaluations of the Mulyavardhan programme using more reliable measures and rigorous research designs like quasi-experimental and randomized control trials.

The purpose of this document is to report on the results of a quasi-experimental out-come evaluation of the Mulyavardhan (MV) Programme. An Executive Summary (Chapter 1) provides a summary of the whole report. In Chapter 2, we provide background information about Bharatiya Jain Sanghatana (BJS), values education in India, the Mulyavardhan programme, and the context of this study. We describe the research methods, including the evaluation design, data collection procedures, measures and statistical analysis in Chapter 3. In Chapter 4, we report data on the sample and baseline comparability. In Chapters 5 and Chapter 6, we report the results from statistical analyses of data from students and teachers on process, and from data on outcomes from students, parents and teachers. Finally, in Chapter 7, we provided a discussion of the results, the limitations and strengths of the study, and the implications of the results.

We thank BJS for the opportunity to conduct this quasi-experimental evaluation and set up a randomized controlled trial (RCT) of the Mulyavardhan programme. We are very grateful to Mr. Shantilal Muttha (President, Bharatiya Jain Sanghatana), Brigadier Arun Ambardekar, and the Mulyavardhan Research team for their enthusiastic cooperation and collaboration on this project. We are particularly grateful for the opportunity to visit some of the schools participating in the MV programme to observe MV teachers delivering MV lessons in some of those schools. Being able to understand the geographical and socioeconomic context of these schools helped us in understanding the data analyzed herein. Our special thanks to the coordinators, MV teachers, principals, government teachers, and the children and parents who responded to our surveys – without their participation, this project would not have been possible.

About the Authors

Brian R. Flay, D.Phil., is a Professor of Health Promotion & Health Behavior in the School of Social and Behavioral Health Sciences in the College of Public Health and Human Sciences at Oregon State University, USA. His training was in social psychology at Waikato University in New Zealand. He was previously Distinguished Professor of Community Health Sciences (Public Health) and Psychology at the University of Illinois at Chicago, Associate Professor of Preventive Medicine at the University of Southern California, Assistant Professor of Health Studies at the University of Waterloo in Canada, and Postdoctoral Fellow (on a Fulbright/Hays Fellowship) in Evaluation Research at Northwestern University. Most of Dr. Flay's work has concerned the development and evaluation of programmes for the prevention of substance abuse, violence, and AIDS. Recent studies focus on positive youth development, including social-emotional and character development. Dr. Flay has been conducting randomized trials in schools (in Canada, California, Chicago and Hawaii) for over 30 years and he has also written extensively on methodological and theoretical issues. Dr. Flay is a Fellow of the Society for Behavioral Medicine, the Society for Community Research and Action, and the American Academy of Health Behavior. He received recognition for outstanding research from the Research Council of the American School Health Association (1993), and the American Academy of Health Behavior (Research Laureate Award, 2001). Dr. Flay has published over 250 peer-reviewed papers and 40 book chapters; and was recognized by Current Contents ISI in 2003 as a "Highly Cited Researcher" – in the top 1/2%.

Sushma Jaswal, Ph.D. is a researcher at BJS, where she coordinates the evaluation of the Mulyavardhan programme. She received her training in Anthropology with specialization in Human Development at Panjab University, Chandigarh. She was a UNDP Fellow with the department of Family & Child Ecology at the Michigan State University, East Lansing. During her four decades of teaching and research career she has supervised 8 Ph.D and 33 M.Sc. theses. She has published more than 100 research papers in national and international refereed journals. She has published 20 books and research Bulletins. She was Head of Human Development Department at Punjab Agricultural University at Ludhiana for eight years and had also been the Faculty Dean. She was technical coordinator of multi-location universities all India coordinated research project in Child development sponsored by Indian Council of Agricultural Research. She is empanelled as a subject expert by Union Public Service Commission, several state public service commissions, Agricultural services recruitment Board and several Indian universities.

Chapter 1 - Executive Summary

Bharatiya Jain Sanghatana (BJS), Pune, is a non-political, non-profit, non-governmental organization (NGO) with a national footprint. It aims to identify important national issues and the affected populations and to provide practical solutions based on research and actual experiences. Values education was identified as one such need, and the Mulyavardhan (MV) programme has been created to meet it.

The Mulyavardhan Programme and Context

Despite tremendous advances in science and technology in the twentieth century, recent times have witnessed increased negative behaviour among children and youth. These are manifested in the rise of all kinds of behavioural problems, including crime, violence, drug abuse, and corruption. BJS believes that the introduction of a new values education initiative, "Mulyavardhan" (literally meaning 'enhancement of value'), for Standards I to XII could be a panacea for these problems.

Introduction of a well-designed intervention was considered meaningful for these formative years; the most appropriate time to transform the tremendous source of intellectual and social potential into agents of positive change. The transformation processes are expected to enable children to understand and reflect on different values and the practical implications of expressing them in relation to themselves, others, the community, and the world at large. Thus, the mission of the Mulyavardhan programme is to develop universal values and morals in children during their early formative years. The emphasis is on important values, good habits, and positive attitudes and skills.

Mulyavardhan (MV) is currently being implemented in 446 Zilla Parishad schools of Patoda, Ashti & Kaij tehsils of Beed district and 55 Municipal Corporation schools of Jalgaon city of Jalgaon district of Maharashtra state of India. To date, the Mulyavardhan programme has reached 34,718 students of Standards I through IV.

The Mulyavardhan curriculum delivery follows principles of co-operative learning that uses various methods to ensure that the process of learning is joyful, intrinsically motivating, and effective. In the schools included in this evaluation, Mulyavardhan was

provided to every Standard I to IV student for one period every day of each school week.

Mulyavardhan is delivered by specially trained teachers who are designated by BJS as 'MV teachers.' All MV teachers are from local areas with the basic qualification of a Diploma in Education. They are enrolled for training without an interview. Before final recruitment, they are currently provided 67 days intensive residential induction training that is then supplemented by 'on-site' training. The purpose of training is not only to develop a battery of skills for effective transference of content and methodology of the Mulyavardhan programme, but also to transform the individual trainee's values, attitudes and self-confidence. Further skill refinement of Mulyavardhan teachers is conducted through BJS's monitoring system.

The training has evolved since 2009, from only 10 days, through 46 days, followed by 60 days to its present form of 67 days. This journey also brought improvements in the content, methods and rigor of training [1]. ***The Patoda and Ashti MV teachers included in this evaluation received anywhere from 10 to 60 days of training.*** It is likely that Ashti MV teachers received more training than Patoda MV teachers, on average, but we did not have the data necessary to check this.

A prior non-experimental impact assessment found that students, parents and teachers felt that participation in the Mulyavardhan programme improved their values, behaviours and skills [2]. On the basis of these results, it was hypothesized that students exposed to the Mulyavardhan programme would produce significant positive effects across a variety of values and behavioural outcomes of both boys and girls of Standards I through IV when compared with non-Mulyavardhan counterparts in comparison schools.

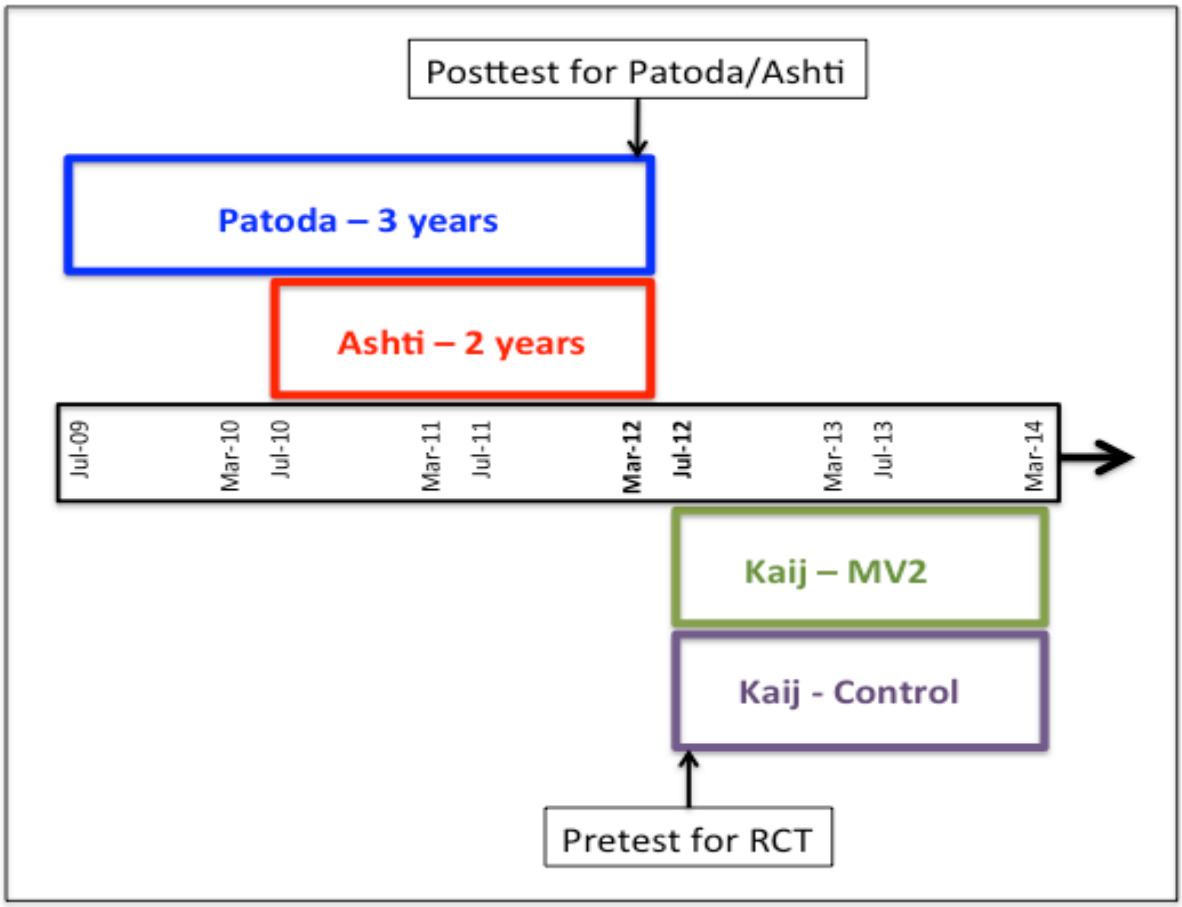
Evaluation Methods

Evaluation Design

The present quasi-experimental impact evaluation was conducted in schools in the Ashti, Patoda and Kaij tehsils of Beed district in the State of Maharashtra. The nature and extent of outcomes documented in the prior evaluation[23] have not been explored rigorously – with reliable measures and a comparison or control group. The current quasi-experimental evaluation arises out of a need to document the impact of the programme in comparison with students and their parents and teachers in schools where Mulyavardhan was not delivered. A future study will be even more rigorous, with random assignment of schools to MV or control conditions.

The research design is summarized in **Figure 1-1**. Mulyavardhan started in Patoda schools in July of 2009 and Ashti schools in July of 2010. Data were collected from Patoda and Ashti schools in March 2012. Kaij schools were randomly assigned to participate in a randomized controlled trial (RCT) of a revision of the Mulyavardhan curriculum (MV2) starting in July 2012, when pretest data for the RCT (and for the comparison group for the quasi-experiment) were collected.

Figure 1-1: Research design



Data Collection

In Patoda and Ashti, MV teachers collected data from schools other than those they taught in. In teams of 2 or 3, they surveyed all students, teachers and principals present on the scheduled day, interviewed a sample of their parents at their homes, and completed surveys themselves.

Data collection from Kaij schools was conducted by two groups of MV teachers, where

one group was assigned to collect data from control schools and the other one from Mulyavardhan schools. This work was completed in Ashti and Patoda schools during March-April 2012 and in Kaij schools in July 2012.

Surveys were administered to 8,378 students (Standards I through IV), 249 of their teachers and 130 principals in 140 schools (30 Ashti, 30 Patoda and 80 Kaij). MV teachers interviewed 2,590 parents (approximately 20 per school), and 60 MV teachers (who taught in Ashti and Patoda) also completed surveys.

Collecting and entering so much data was a heroic effort by BJS staff! Some data editing was necessary before they could be analyzed. One very important aspect of ongoing work concerns assigning identification (ID) numbers to each village/school, MV teacher, teacher, principal, student and parent, so that all cases can be linked to each other with minimal error, not only for this one time, but also over time.

Measures

Students and their teachers and principals answered 70-100 questions that formed into 19 values/behaviours that BJS expected would be improved by the MV programme. The 19 values/behaviours were: prosocial behaviour, honesty, self-control, respect for teachers, respect for parents, empathy, two scales on responsibility (negative-irresponsible and positive-responsible items), personal hygiene, two scales on bullying (items that it is wrong, and items that it is ok), teasing, helping, two measures of school bonding (attachment to school and disaffection with learning), victimization, motivation to learn, self-esteem and perceptions of school climate. The 19 scales correlated moderately with each other so we also created one "Single Factor" score (the overall average of the 19 scale scores).

Students and MV teachers also answered "process" questions about their participation in the MV programme. Parents responded to 45 items, mostly about their child's behaviour, but also 8 questions about their own parenting practices. In addition to answering questions about student behaviours, as summarized above, government teachers, MV teachers and principals ("adults" in the following paragraphs) each answered 52 other questions about their own values and behaviours that formed four scales: their philosophical view of values, and three scales about how three kinds of student behaviours affect their ability to learn: social skills, sense of self/control and mental health. Ashti and Patoda Government teachers also rated their villages on 43 items that formed four factors: village problems/poverty, community stability, family wealth/stability and family poverty.

All scales used in this evaluation were found to have adequate reliability [3]. ***Overall, given the lack of opportunity to pilot these surveys before their use, we managed to create a remarkably reliable set of surveys.***

Statistical Analysis Strategies

We used multilevel modeling to take account of the nesting of students within schools, and included student-level (gender and class), school-level (number of girls, have a playground or not) and village-level (population, % scheduled caste, % marginal workers) covariates in the final models.

To aid in interpretation and comparison with other findings, we also calculated a measure of effect size called "percent relative improvement" or %RI. This is simply the average score for the MV group minus the average score for the comparison group divided by the comparison group score. For example, if the average scores for the MV and comparison groups were 3.0 and 2.5, the %RI would be (3-2.5)/2.5*100 = 20%, and it would indicate that MV students scored, on average, 20% better than comparison group students.

To put the resulting effect sizes into perspective, the convention in the literature is to think of %RI around 10% as small, 20% as moderate, and 30% as large [4]. Average effect sizes for school-based social-emotional learning (SEL) programmes are about 10% for positive social behaviour and academic performance, and about 20% for specific SEL skills [5]. A well-known programme with many positive effects, *Positive Action*, has an average RI of about 15%, considered moderate to large.

Sample and Village Characteristics

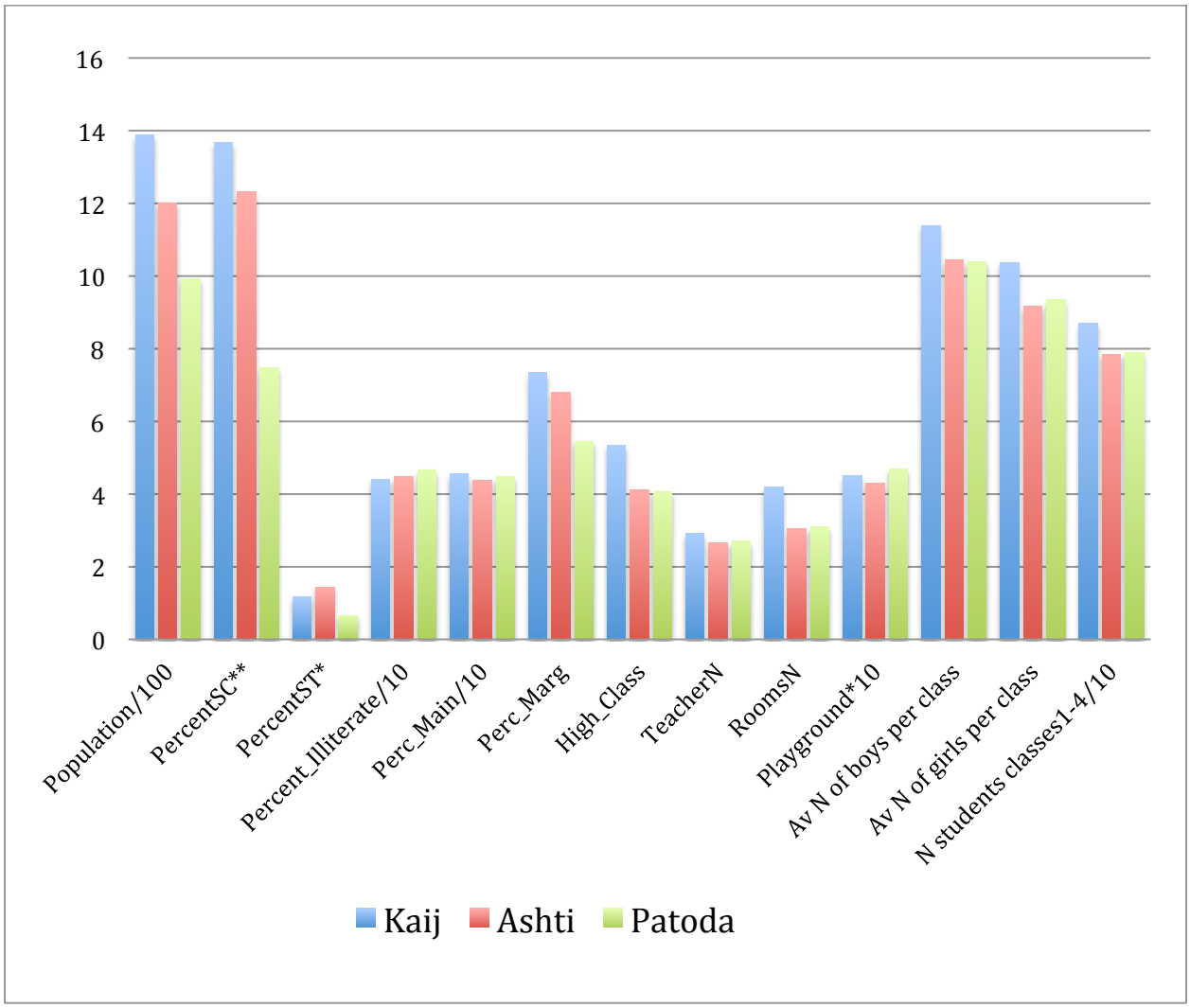
MV schools were in small rural villages with an average population of 1264, ranging from only 346 to over 10 times that (3992). Thirty to 70% of these populations were illiterate (significantly higher than the state average of 17% [6]) and only 20-60% had regular, fulltime work. The schools were correspondingly small, ranging from one to 8 classrooms, and slightly less than one half had playgrounds. The number of students in Standards I-IV and, thus, eligible for the study, ranges from 36 to 173 (average = 84). The average number of teachers was 2.81 (range 1-6), teaching in 1-8 classrooms (average 3.72).

Of the students, 53% were boys (47% girls); 24% were in Standard I, 24% in Standard II, 26% in Standard III, and 26% in Standard IV. Of the parents/guardians who answered surveys, 63% were males (mostly fathers), of whom 24% reported no schooling, 33% less

than 8th, 14% some high school, 15% completed high-school, 8% some college, and 5% college graduation. They represented the parents/guardians of equal numbers of boys and girls.

Figure 1-2 shows the high level of comparability of the 3 sets of villages/schools. The only statistically significant differences between these sets of villages concerned the percentages of scheduled caste and scheduled tribe residents, with the highest numbers of these in Kaij (13.6% and 1.16%, respectively) and lowest numbers in Patoda (7.5% and 0.65%, respectively).Kaij schools tended to be a little larger than Patoda or Ashti schools on average, but this difference was not statistically significant.

Figure 1-2: Baseline comparability of Kaij, Ashti and Patoda villages/schools

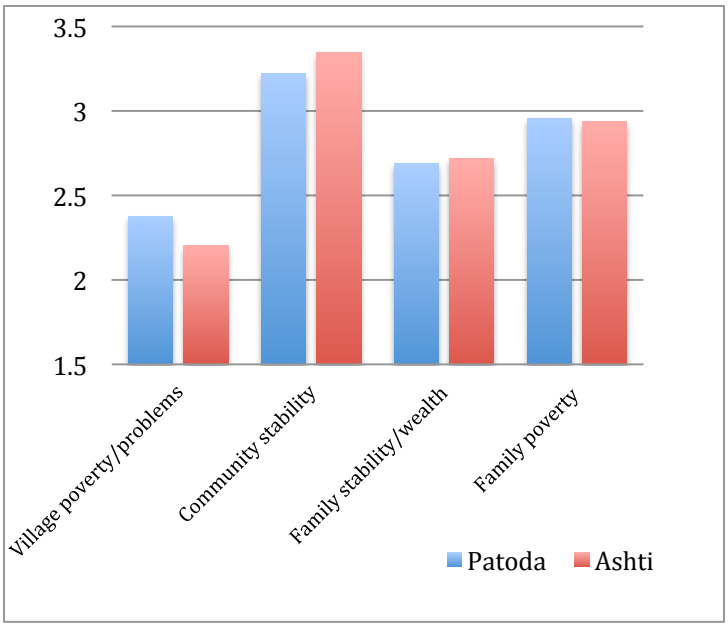


Of the 439 other adults who completed surveys, 249 were Government Teachers (55% male), 130 Principals (92% male) and 60 MV teachers (52% male). ***MV teachers in Ashti***

were more likely to be female (and live in or near the village in which they taught MV) than in Patoda (or teachers in Patoda were more likely to be male).

Government teachers in Patoda and Ashti rated 43 characteristics of their villages that formed four scales. ***Teachers rated Patoda villages as having significantly more problems and poverty, and as having less community stability, when compared with Ashti villages*** **(Figure 1-3)**.

Figure 1-3: Teacher ratings of villages on four scales



Within Kaij, where the MV2 programme had not yet started by the time of data collection, students in schools assigned to receive MV2 reported significantly better values and behaviours than students in the schools assigned to the control condition (11% RI). This finding was unexpected, and may be due to an "expectation" being set up in the MV2 schools by their principals and/or teachers, or by the MV teachers who collected the data. Parent data showed a similar pattern. Indeed the average effect size between Kaij control and MV2 schools was even larger, 17%. It seems that parents of students in schools who expected to get MV2 had very high expectations! Teachers' ratings of student values/behaviour, on the other hand, showed a reverse, but smaller, pattern – teachers in school assigned to MV2 rated students, on average, 3.7% lower than students in schools assigned to the control condition. ***Given these differences, the decision was made to use only the 35 schools assigned to the MV2 condition as the comparison set for this quasi-experiment. This provides a partial adjustment for the "expectation" effect.***

Process Results

Students and MV teachers generally reported very positive attitudes toward the MV programme and the activities in it. However, ***contrary to expectation, neither students nor MV teachers rated the programme better after 3 years (in Patoda) than after 2 years (in Ashti).*** This effect was particularly strong in villages with high proportions of scheduled castes.

MV teachers trained for Ashti were more satisfied with their training and had more positive attitudes about MV than teachers trained for Patoda. This probably reflects the fact that Ashti MV teachers had more days of induction training, on average, than Patoda MV teachers.

MV teachers in Patoda (during the 3rd year of MV) were more likely to invite parents to MV school events during 2011-2012 than MV teachers in Ashti (during the 2nd year of MV). However, MV teachers in Ashti and Patoda schools did not differ in how much they shared student success stories with parents or emphasized to parents the importance and benefits of reinforcing their children's good behaviour.

On a 2-point scale (no vs. yes) most students also liked all of the MV activities (mean = 1.88 or 88% responding yes). Students, not surprisingly, generally liked fun activities the most and teacher-led activities the least. ***More students from Ashti than from Patoda liked the activities (means = 1.91 and 1.86, or 91% vs. 86%, respectively).***

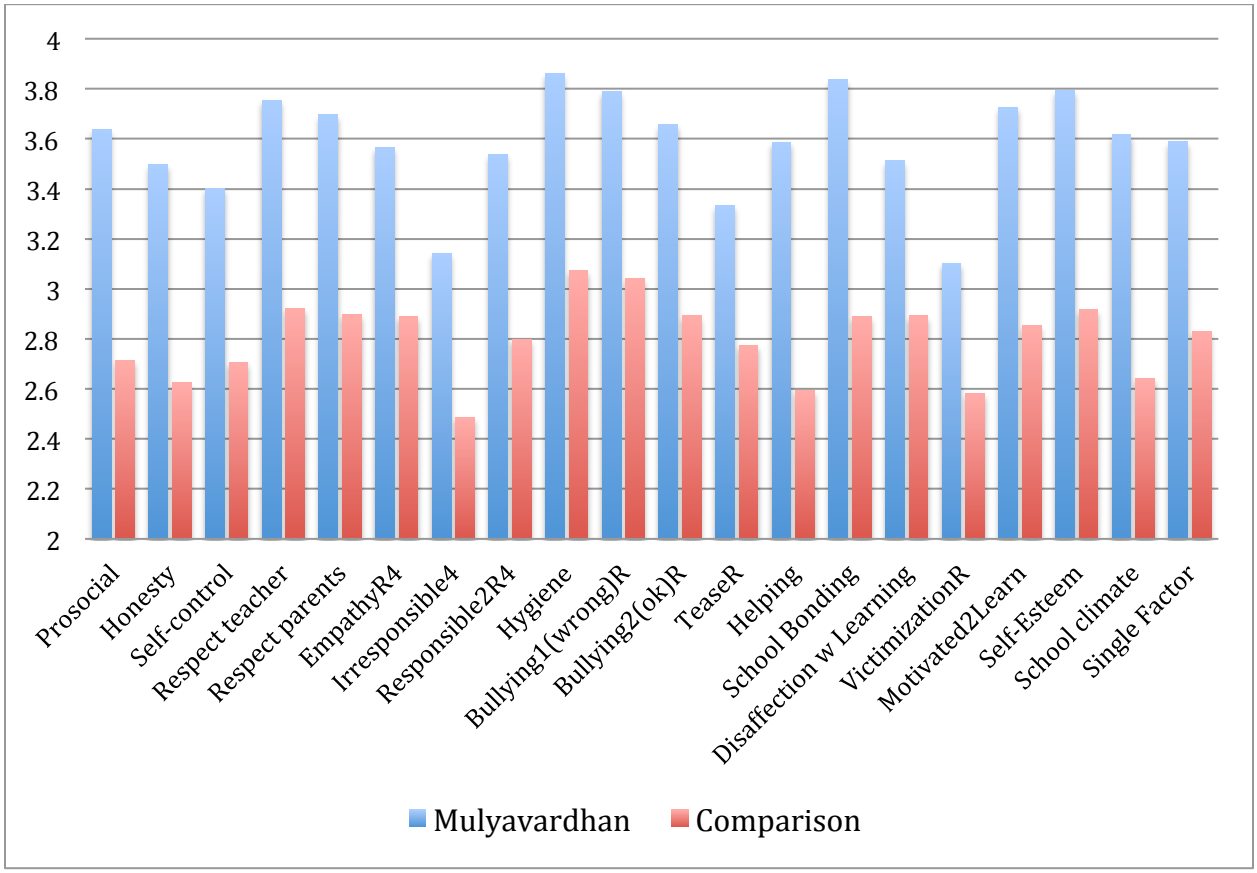
Although we did not have access to data to confirm this, personal communication suggests that ***the Mulyavardhan programme was implemented at very high levels, both in amount and quality.*** This is very different from the integrity of programme implementation in evaluations in the United States, where it is difficult to get enough time during the school day to fully implement an experimental programme. Personal communication also suggested that ***the comparison schools in this study probably did very little or no values education during the period of this study*** – that is, they were a pure "no-treatment" comparison group. This is also very different from U.S. studies, where most schools already offer some form of health promotion, social-emotional learning, character development, or values education. Thus, the possible effect sizes in rural Indian schools with dedicated teachers could easily be double those found in the U.S.

Outcome Results

Students

For students, the average effect of the MV programme was a large 28% improvement relative to comparison group students. The programme had its largest effects on a set of self-related outcomes – helping (38%), prosocial (34%), and honesty (33%); and a set of school-related outcomes – perception of school climate (37%), school bonding (33%), motivation to learn (32%); and the smallest effects on teasing and feeling victimized (20%) and school disaffection (21%), although even these effects were still large by international standards (see **Figure 1-4**[1]).

Figure 1-4: Student scores on values/behaviours: MV vs. comparison schools



For most outcomes and predictor variables, none of the interactions with condition were significant, suggesting that the MV programme was equally effective for boys and girls, for students at different levels (Standards) and in villages with different

[1] R after the variable name indicates the scale score was reversed. 4 after the variable name indicates that the scale score was transformed to be on the same 4-point scale as other variables.

populations and different kinds of people.

The one variable for which there were some statistically significant interactions concerned class/Standard. These effects were small, however, and not in any consistent direction. For example, the effect of MV on respect for teachers was smaller for older students, and the effect on feeling victimized was smaller for younger students. Programme developers and trainers might look closely at these results to determine their implications, if any for future development and training, although this pattern of effects did not appear to be present in Ashti schools.

Teachers and Parents

Teacher survey data also showed the same overall pattern of effects of the MV programme, but the average effect was much smaller than the student estimate (RI = 10.5%).

Parent interview data showed the same pattern of effects. Indeed, the effects were similar to the student effects, with an average improvement of 27%.

More highly educated parents rated their child's behaviours and their own parenting style better than did less educated parents. However, this difference was no longer apparent for parents of MV students - thus leading to a smaller difference between MV and comparison students of better-educated parents.

Effects of Exposure

Another objective of this quasi-experimental evaluation was to determine how much difference 3 versus 2 years of intervention would make. This is accomplished by comparing results from Patoda and Ashti. ***Statistical analyses of the student and teacher data found no statistically significant differences between Patoda (after 3 years) and Ashti (after 2 years) schools overall.*** Parents actually reported significantly larger effects in Ashti than in Patoda schools.

Some of differences between Patoda and Ashti were present more for some class levels than others. For example, smaller effects occurred after 3 years than 2 years for "helping," "feeling victimized" and respect for teacher" with Standard IV students, and smaller effects occurred after 3 years than 2 years for "self-esteem," "teasing" and "school bonding" for both Standard III and IV students.

Discussion and Implications

Overall, the pattern of effects of the MV programme on student values and behaviours was very positive. Student, teacher, and parent reports of student values/behaviour showed large differences between the MV schools (in Ashti and Patoda) and the comparison schools in Kaij. The average size of the effect was large by international standards - a relative improvement of 28%. This means that students in MV schools improved by 28% compared to students in comparison schools.

On the whole, the observed programme effects also seem to be consistent across types of students (gender and class), schools and villages. This is not a common finding, so is regarded as very positive.

An unexpected finding was that the effects after 3 years of the MV programme were no larger than the effects after 2 years. There are multiple possible explanations of this: improved and longer training of Ashti MV teachers [1] (resulting in higher satisfaction with training by Ashti compared with Patoda MV teachers), fewer female teachers (who live in or near the village in which they taught MV) in Patoda schools, and and higher levels of problems/poverty and instability in Patoda villages. It is also possible that the novelty of MV to both teachers and the students begins to wear off after two years. ***These possibilities deserve further research***.

There were serious limitations to this quasi-experimental evaluation. These include the lack of random assignment so that there may have been unmeasured differences between MV and comparison schools and the lack of pretest data. In addition, assigning two different teams of MV teachers to collect data from the MV2 and control schools in Kaij may have led to subtle messages that biased student and parent responses to surveys.

Although many positive outcomes were found, it is difficult to determine the extent to which these changes were a result of the novelty of the MV programme for these students, schools and parents, the MV content, the special training of the MV teachers, the teaching techniques employed, the engagement with parents, or the general support received from the staff at those schools. ***Future studies could attempt to separate these effects.***

Despite the difficulty of attributing cause, the findings of this evaluation make it likely that the MV programme has large effects. The size of the effects observed in this quasi-experimental evaluation suggest that having 35 pairs of schools in the randomized controlled experimental evaluation in Kaij schools should be more than sufficient to detect significant effects.

Chapter 2 - Mulyavardhan Programme and Its Context

In this chapter, we provide background information about the values education, the Mulyavardhan programme, and the context of this study.

Bharatiya Jain Sanghatana (BJS)

Bharatiya Jain Sanghatana (BJS), Pune, is a non-political, non-profit, non-governmental organization (NGO) with a national footprint. This organization works for humanity at large by transcending boundaries of caste, creed, color, religion, language and region.

Mr. Shantilal Muttha, founder of this highly professional and dynamic organization, has been providing excellent leadership since its inception in 1985. It has spent more than 27 years providing services in three sectors, namely, *Social Development, Education and Disaster Response.* It aims to identify important national issues and the affected populations and to provide practical solutions based on research and actual experiences.

Values Education

Genesis

BJS's long and eventful journey in the Social & Educational fields for three decades at the grass roots level has brought realization of the decline of values and morals along with an increase in violence, arrogance, aggression and intolerance in the younger generation. Despite tremendous advances in science and technology in the twentieth century, the dawn of the new millennium has witnessed violence, terrorism, war and conflict all over the world. These negative trends in the social environment have manifested in the rise of crime, violence, drug abuse, all dimensions of corruption, and behavioural problems among children and youth. These undesirable trends, with their far-reaching disruptive consequences, cut across all ethnic groups and socio-economic strata of rural and urban communities in India. Such a situation was unknown to earlier generations. BJS took a conscious decision to work on the issue of declining values that has triggered moral decay

in Indian society over the last 20 years [7].

Initiative

BJS firmly believes that the introduction of the new values education initiative, "Mulyavardhan" (literally meaning 'enhancement of value') for Standards I to XII is the panacea for these problems. The time span between Standard I to XII encompasses the impressionable years, pivotal for the development of the child and adolescent. This is the appropriate time to provide a well-designed intervention so as to transform the tremendous source of intellectual and social potential into agents of positive change. The transformation processes initiated by Mulyavardhan are expected to enable children to understand and reflect on different values and the practical implications of expressing them in relation to themselves, others, the community, and the world at large. It is expected to motivate young minds in making personal and social choices with deepened understanding and responsibility and thus making 'Mulyavardhan', a philosophy of values-based life [7].

Philosophy

The Mulyavardhan programme was formulated after detailed study of eastern and western philosophies of values education. The Mulyavardhan programme largely draws its inspiration from the ancient Indian education system, which emphasized that education is the eye of insight and source of illumination. The Mulyavardhan curriculum reflects the sense of peace and humanity that has been emphasized in the ancient Indian education system. Mulyavardhan represents the methodology of value inculcation whereby certain values, which were chosen by thorough research on universal values, are instilled and inculcated in children.

The universal 'Golden Rule' [8] (positive form - one should treat others as one would like to be treated, and negative form - one should not treat others in ways that one would not like to be treated) [9] is central to the Mulyavardhan philosophy. The Golden Rule has also been emphasized in the 'Universal Declaration of Human Responsibilities' wherein it is said "There is no need for a complex system of ethics to teach human action. There is one ancient rule that, if truly followed, would ensure just human relations: the Golden Rule" [10].

If the negative or prohibitive form of the Golden Rule were to stand *alone*, it would simply serve as a proactive motivation *against* wrong action. The Golden Rule *in general* serves as

a motivation *towards* proactive action, and the Golden Rule is of no use to you unless you realize that it's your move! [11, 12].

The observance of the Golden Rule in daily life motivates a person to treat others in positive ways, as s/he would like to be treated by others. Initiation of such positive interactions with others not only makes the initiator a happy person, but also brings happiness to the person with whom s/he interacts. Positive interaction begets positive response and leads to happiness. Once the person feels happy by being positive with others and, in return, being treated positively by others, s/he feels enormous peace within. This inner peace enables the person to initiate more positive actions/interactions with the outside world and thereby extend inner peace to everyone in the space around him/her. Thus, observance of the Golden Rule has the potential of creating a caring, safe and peaceful world for every individual. Such a person cannot be intolerant, aggressive, arrogant, and violent to others, as s/he would not like to be treated like this by others.

Values Education in the Indian Context

Education plays a fundamental role in personal and social development. It creates a better skilled work force, although often at the cost of the development of the individual as a whole. The long-term goals of human values, peace and moral principles tend to become less important when they have to compete with immediate economic considerations. Intervention is needed at all levels of education for peace in the world and a peaceful global society. Peace education has been recognized as an essential part of the United Nations Charter, Universal Declaration of Human Rights, UNICEF, UNESCO and Global Civil Society.

Spiritual and moral education is not a new concept in the context of India, as it has been an integral part of ancient Indian culture. However, it got diluted due to varied influences and changes in the society. It is still deeply embedded in cultural and religious traditions, drawing human beings into relationship with each other, with nature and the world. Mahatma Gandhi called 'Education without character' one of the seven social sins.

Prior to Indian Independence in 1947, the Central Advisory Board of Education (1943-46) recommended that provision of spiritual and moral instruction for building up the character of the young should be the responsibility of the home and community [13]. The post-Independence period, spanning 1948 to date, is dotted with the recommendations of various Education Commissions/Committees that invariably emphasized the importance of imparting values through education:

- *Radhakrishnan Commission on higher education 1948-49* [14],
- *Mudaliar commission on secondary education 1952-53* [15],

- *Indian Education Commission-'Kothari Commission'1964-66* [16],
- *Acharya Ramamurthy Committee 1990* [17],
- *Planning Commission Core group on Value Orientation of Education 1992* [18].

From time to time, several Committees were formed to make recommendations specifically for values education, for example:

- *Sri Prakasa Committee on Religious and Moral Instruction 1959* [19],
- *Kireet Joshi Committee on value education 1981-82* [20] and
- *Standing Parliamentary Committee on human resource and development 1996-99* [21].

All of these Education Commissions and Committees unequivocally reiterated that value orientation should be the most desirable focus of education throughout the country. *India's National Policy on Education (1986)* [22] also stressed the need for values education to eradicate obscurantism, religious fanaticism, violence, superstition and fatalism.

The journey of seven decades (1943 to date) has witnessed a steady shift from "no need to impart moral/value education in schools, being family's responsibility" to "moral/value orientation as the most desirable focus of education at all levels". This conceptual shift has followed a more general change in thinking about the role of education. The role has changed from its traditional function of inculcating values of life in the young minds to an emphasis on the materialistic benefits of education. This undesirable turn in thinking has happened despite well-meaning thoughts and recommendations of various commissions, committees and a well-thought National Policy on Education. Genuine efforts were made to weave values education into the curriculum of teacher training courses in the country. The long debate on whether values education should be imparted by integrating it into all school subjects or as a separate subject has remained inconclusive to this date. The recommendations made by the *National Moral Educational Conference (1981*) [23] to teach morals as a separate subject did not help to conclude this debate. Unfortunately, the pace of moral decay and consequent sharp deterioration of the moral fibre of Indian society did not stop to wait for action, despite all the positive emphasis on values education by Education Commissions, Committees and Policies of the country.

The Present Scenario

The prevailing education system in the India promotes competition and has given precedence to quantitative performance over qualitative development of students. A number of environmental factors, such as rapid urbanization, industrialization, electronic entertainment, and the accompanying changes in parenting styles and family culture, have

had their negative influences on the cultural and psychosocial development of children. There are more and more day-to-day pressures impinging on the time that parents and children have together.

Television and films are most often blamed for the omnipresence of violence yet, at the same time, violence is not a recent discovery. It is not television or films alone that affect children, although they could be major factors in present times. Violence is being fed by ideas from real life, where truth is often far worse than fiction. Violence in the world is leading to violence everywhere i.e., in the content of television, films, internet, and our living rooms. The point of concern is that violence is no longer considered ugly; rather, in today's world, it is often considered macho, glamorous, and even attractive for money and status. It is essential to remove violence from the media and our society. In this context, the remedy that will ultimately work is to start with children, since we know it is difficult to change the behaviours of adults. The foremost, among many initiatives that could be undertaken, is to bring forth the role of schools in inculcating the values in children all through their school years i.e., Standards I to XII. Only the internalization and practice of values by children in daily life will ensure that they will participate with enthusiasm in, even spearhead, worthy causes.

Most recently, intellectuals and thinkers have also echoed a similar view at various occasions, such as:

- *The root cause of corruption, which has taken a shape of an epidemic in the country, is due to sharp deterioration in moral fibre of society*
- *It is unfortunate that moral education has been removed from the academic curriculum in India despite the fact that it is the responsibility of academic institutions to nurture and develop the sense of morality among students*
- *While economic and educational development was helping the poor and the marginal to improve their living conditions, steps must be taken to prevent crime at the grassroots level which is possible only if students are exposed to moral education from the school level itself* [24, 25]
- *The Madras High Court has asked the government of Tamil Nadu to discuss introducing moral education as a subject across the state schools* [26].

The Mulyavardhan Approach

Review of scientific literature concerning the issue of erosion of values indicates that it is a global phenomenon. It will require a long-term permanent solution rather than a temporary quick fix. A liberal, broader and pragmatic perspective will be desirable, rather

than getting bogged down by diverse, often idealistic, views. All perspectives regarding the solution to the problem unequivocally agree on imparting moral and values education in schools.

There are different approaches to the central question, "how to impart values in the schools?" One school of thought thinks it should be integrated with other academic subjects. Another view is that it should be introduced as a standalone subject like other academic subjects. And yet others want it to be taught as a separate subject but differently from other academic subjects. The debate on these three different approaches for imparting moral and values education could be unending. At this juncture it would be wiser to reflect upon the available resources in terms of manpower, funds and time at our disposal to address the problem that is getting graver every year. In this context, after meticulous reflection upon all these three choices, BJS voted to work upon the third choice.

The rationale for the third choice is that it gives scope for creating a unique intervention with child-centric, results-oriented content. The other reason to adopt this approach is the flexibility it offers to render it appropriate for multiple regions and socio-cultural groups - essential given the socio-cultural kaleidoscopic diversity of the country. It was also favoured over the first approach, as it would involve working out the fine details of the 'moral and values' content of each academic subject in each standard and then designing, developing and conducting subject-specific trainings of entire schools for integration of moral and value education. The work would not end there; it would get more complicated for the tasks of implementation, monitoring and evaluation. Above all, the integrated approach would have taken too long to field it in the schools.

Mulyavardhan Curriculum

Universal values are the focus of the Mulyavardhan curriculum; these include: kindness, patience, tolerance, cooperation, empathy, equality and peace. These values work towards reducing aggression, arrogance, intolerance and violence. Along with Universal Values, the curriculum includes core values and life skills accepted by the National Council for Educational Research and Training (NCERT, Delhi, India, 2005) [27]. The curriculum is ensured to: i) deal sensitively with various subjects with a local flavor; ii) be religion-neutral; and iii) include age-appropriate content with child-friendly techniques of content delivery.

The teaching learning modules (as elaborated standard-wise below) included in the Mulyavardhan curriculum aim at building the character of its recipients, i.e. students of Standards I thru IV [7]. This developmentally appropriate curriculum, with unified scope,

sequence of contents, and skill-building exercises, is designed to nurture core values to foster morals necessary for cultivating skills for creating caring, safe and peaceful environs in and outside school. It is designed with the objectives that children:

1. Understand the basic moral values and learn their applicability in daily life.
2. Acquire social competency through skill-building exercises.
3. Acquire emotional competency through recognition of their own emotions and those of others.
4. Cultivate skills to deal with conflict.
5. Manage interpersonal relations.
6. Develop a humanistic approach towards life.
7. Become sensitive to responsibility, respect, cooperation, patience, tolerance, honesty and self-discipline in themselves and others.
8. Inculcate the observance of personal hygiene in daily life.
9. Are enabled to be just & fair with self and surroundings.
10. Acquire skills for being able to create peaceful communities.

It is expected that the inter-play of all the values taught in the Mulyavardhan curriculum has the potential to make a positive difference in the behavioural outcomes of the students. The curriculum, being age-specific and developmentally and socially appropriate, ensures sustained interest**.** The Mulyavardhan exposure will enhance students' socio-emotional competencies, is expected to make them respectful of their parents, teachers and elders, and will turn them into responsible and honest citizens. Students will be self-confident, will acquire skills for resolving conflicts and managing interpersonal relations, and will be empathetic to develop humanistic approach towards life. It is expected that students will develop cooperation, patience and tolerance - so essential in real work situations at home and school. They will observe personal hygiene so important for keeping the body healthy, and a prerequisite for a healthy mind. The students shall be able to manage their emotions better than before, creating the desired ambience at school and home. It will be effective in making them work hard in other academic subjects, and the emerging success from such behaviours shall make school a likable place. Such changes will also reduce absenteeism, and changes in students' behaviour will improve the quality of schools. In a nutshell, Mulyavardhan intends to impact children so that they become respectful, caring, empathizing, diligent, committed, tolerant, cooperative, critical thinkers, just and fair, and capable of creating peaceful communities.

The content by Standard is summarized as follows:

- Standard I – Friendship, Cooperation, Compassion, Unity of mankind, Peace creating students, Bonding, Expressing Emotions, Virtue of Peace, Peace and Conflict, Thinking about the consequences, Problem Solving, Unity of mankind.

- Standard II – Bonding, Respecting Emotions of each other, Peace and Conflict, Community Building, How rules help in peace, Caring for others, Our friends and companions, Virtue of Peace, Development of virtue of Peace, Golden rule, Controlling a difficult situation, Unity of Mankind.

- Standard III – Bonding, Sensitivity and Golden Rule, Concept of Peace, Virtue of Peace, Development of virtues, Unity of Mankind, To be a messenger of Peace (1.Accept responsibility to solve problems 2.Help Solve problems 3.Solving problems – Ask for forgiveness).

- Standard IV – Bonding, Understanding Conflict, Follow good practices, Virtue of Peace, Development of virtues, Development Inner Peace, Being a creator of Peace, Unity of mankind, Inner Peace.

Curriculum delivery

The Mulyavardhan curriculum delivery follows principles of co-operative learning; i.e., uses methods like role playing, whole-class-discussion, working in pairs or small groups, presentations by children, individual activity, etc. The themes of the lectures are reinforced through interesting and age-appropriate stories, songs/poems, and games to ensure that the process of learning is joyful. Mulyavardhan is provided to all students (every Standard) for one period, every day of each school week.

The Mulyavardhan Teachers

Another way in which Mulyavardhan is unique is that all MV teachers are from the local area. They are provided with a rigorous induction training – that has been applauded through an assessment of the training using pre-post design supplemented by video assessment. The specially trained teachers are designated by BJS as "MV teachers."

The basic qualification of all the teachers is a Diploma in Education. In addition, they are enrolled in training without an interview. Before recruitment they are provided intensive residential induction training. The training has evolved and improved since 2009, from 10 days, through 46 days, followed by 60 days, to its present form of 67 days [1]. Induction training is further supplemented by 'on-site' training. A highlight of the training is its potential to affect positive changes in the trainee's values, attitudes and self-confidence. This is in addition to the development of skills for effective transference of content and

methodology of the Mulyavardhan curriculum. Further skill refinement of Mulyavardhan teachers is conducted through BJS's monitoring system, which has been in place since the initial implementation of Mulyavardhan in the field. ***The Patoda and Ashti MV teachers included in this evaluation received anywhere from 10 to 60 days of training.*** It is likely that Ashti MV teachers received more training than Patoda MV teachers, on average, but we did not have the data necessary to check this.

The Unique Selling Proposition lies in the fact that the Mulyavardhan Teacher Training modules focus not only on pedagogy (teaching methods) but also on the development of the socio-cultural skills and personality of the trainees.

Implementation

At present Mulyavardhan is being implemented in the government schools of Zilla Parishad or State Government (Patoda, Ashti and Kaij tehsils of District Beed) and Municipal Corporation schools of Jalgaon city of Maharashtra state. Concerned authorities granted formal approvals and permissions prior to its implementation in 2009. **Table 2-1** (next page) shows the number of schools, students (from Standard I thru IV) and MV teachers engaged in Mulyavardhan in each of the three Tehsils (Patoda, Ashti and Kaij) of Beed District of Maharashtra, along with the similar information for Municipal Corporation schools of Jalgaon city. Thus, Mulyavardhan is currently being implemented in 446 Zilla Parishad and 55 Municipal Corporation schools, and has reached about 34,718 students.

BJS chose Government schools over private schools because about 83% of the 11.024,033 elementary schools are run by the Government [28] and 87% of these are located in rural areas [29]. The infrastructure, student-teacher ratio, and performance measures, such as student attendance and dropout rates, are substantially poorer in government schools than in private schools. These facts dictated BJS's choice to design an intervention of values education and to test its effectiveness in rural government schools.

Monitoring

The programme is supervised and monitored by Block Heads and the tehsil Heads. A Block consists of 20 to 30 schools and 15 to 20 MV teachers. Each tehsil - a field monitoring cum administrative Unit – includes 5 to 7 Blocks. Block Heads visit all the schools in their Block once or twice every week to observe Mulyavardhan teachers to check the quality of their teaching methodology and completion of lesson units as per schedule.

Table 2-1: Length and breadth of Mulyavardhan implementation (2009-2013): Numbers of schools, students, MV teachers and monitoring staff by district and tehsil

Mulyavardhan Implementation Summary - 4 Academic Years - Beed & Jalgaon											
#	Ac. Year	District	Tehsil	Monitoring Staff on Field				No of MV Teachers	No. of Schools	No of Students	Monitoring Staff
				Tehsil Heads	Block Heads	Coordinators	Administrative Officers				
1	2009-20	Beed	Patoda (12 Clusters)	0	12 Supervisors	0	0	88	159	8288	12
			Totals	**0**	**12**	**0**	**0**	**88**	**159**	**8288**	
2	2010-11	Beed	Patoda (4 Blocks)	0	4	8	2	105	181	9940	
			Ashti (6 Blocks)	0	6	8	3	146	263	18739	
		Jalgaon	Jalgaon (1 Block)	0	1	1	0	25	46	5848	
			Totals	**0**	**11**	**17**	**5**	**276**	**490**	**34,527**	**33**
3	2011-12	Beed	Patoda (7 Blocks)	1	7	0	1	99	173	8251	
			Ashti 1 (5 Blocks)	1	5	0	1	75	125	9111	
			Ashti 2 (5 Blocks)	1	5	0	1	70	135	7785	
		Jalgaon	Jalgaon (1 Block)	1	1	0	1	34	55	9039	
			Totals	**4**	**18**	**0**	**4**	**278**	**488**	**34186**	**26**
4	2012-13	Beed	Patoda (7 Blocks)	1	7	0		101	170	7842	
			Ashti 1 (5 Blocks)	1	5	0		70	109	8792	
			Ashti 2 (5 Blocks)	1	5	0	1	73	129	7304	
			Kaij (2 Blocks)	0	2	0		26	38	2874	
		Jalgaon	Jalgaon (1 Block)	1	0	0		35	55	7906	
			Totals	**4**	**19**	**0**	**1**	**305**	**501**	**34718**	**24**

Every week the Block Head holds a meeting with all MV teachers of his/her block for two reasons, 1) to get a prescribed written report from MV teachers and 2) to discuss difficulties they might be facing employing the teaching methodology of Mulyavardhan. This meeting gives an opportunity to all the MV teachers to share their difficulties and

administrative issues and experiences with each other, and to arrive at some solutions without referring back to tehsil Heads. It also includes passing on the instructions, if any from Head Office to the MV teachers. Each Block Head hands over the field reports of MV teachers of his/her Block to their tehsil Head who, in turn submits them to the Administrative Officer.

This weekly meeting of a tehsil Head with his/her Administrative Officer every week provides both officials an opportunity for give and take of the important information from the field to Head Office and vice versa. The tehsil Head visits each school of his/her tehsil once in a month, or once every 2 months in case of remote schools. S/he interacts with and collects information from Block Heads and ensures that it reaches BJS Head Office every Sunday. This information is recorded in a prescribed format.

The Land and People

Beed, a district in Maharashtra state of India (**Figure 2-1**) was chosen for implementation of Mulyavardhan in July 2009. At present, Beed has a population of just over 2.5 million of whom 1.3 million are male and 1.2 million female. The child sex ratio, as per the 2011 census, is 801 girls per 1000 boys 0-6 years old. 82% of total population of Beed district lives in villages and the remaining 18% live in urban areas [30].

Figure 2-1: Location of Beed district in Maharashtra state

Beed has a backward economy with negligible growth. Beed is one of the poorest districts of Maharashtra with per capita GDP of Rs. 15, 303 (about $380) which is lower than the Maharashtra State average GDP of Rs. 17,079 (about $427)[28]. Beed's population is composed of multiple ethnic groups.

Most of the land of this district is rough and rocky. Deforestation, desertification, frequent droughts, shrinking water reservoirs and extreme shortages of drinking water, especially in rural areas, are major issues. The town of Beed is reachable only by road. The main occupation in the district is agricultural, particularly cotton farming, but due to lack of adequate and timely rainfall there is scarcity of agricultural produce, as it solely depends on the rain.

The average literacy rate of Beed is 73.53% [30]. Compared to 82.91% for the state of Maharastra [6]. There are 2,019 primary schools run by the *Zilla Parishad* or State Government in the district. All children are enrolled in schools. However, attendance and continuity of schooling are at the discretion of parents. The school provides them books, uniform and mid-day meal. The daily routine of primary school children involves rising early and helping with household activities before leaving for school. Girls as young as 8 to 10 years old cook and take care of younger siblings and engage in all household chores when the mother is away at the fields. Evening time is spent on outdoor games, watching television, and studies. Children are generally shy and reticent. Parental education being minimal, and parents' inability to give adequate time to children due to their struggle to make ends meet, leaves children with little stimulation from their family environment.

Tradition has put females in a disadvantageous position. Beed has recently become infamous for being one of the worst ten districts with the lowest child sex ratio in India [31]. Though the influence of print and electronic media is marginal when compared to urban environments, the emotional load on children coupled with stark poverty puts them at disadvantage. This environment dissuades the need for sustained education, since basic needs of survival are met after tremendous hardship. Thus, attendance in school and continuation of schooling becomes an area of concern.

Such an environment can naturally be an impediment to the healthy psychosocial development of a child. Hence the pressing need for values education for this segment of society. Recognizing these impediments and understanding the growing need for provision of a morally sound environment for children in Beed, became the rationale for beginning the Mulyavardhan programme in Beed district. The Mulyavardhan programme also aims to enhance children's motivation and interest in school to facilitate their holistic development.

Prior Evaluation Results

Cambridge University Technical Services (CUTS), Cambridge University, conducted an initial (posttest-only, non-experimental) impact assessment in 2011 in 40 schools of Patoda tehsil. The findings were positive and provided encouragement to continue Mulyavardhan by incorporating feasible improvements as recommended by the study [2].

Questionnaires were developed by CUTS for principals, teachers, students, MV Teachers and coordinators of the Mulyavardhan programme. These were translated into Marathi, the local language. Measures were taken to ensure honest feedback from stakeholders.

The questionnaires were comprised of both closed-ended and open-ended questions. For the closed-ended questions, both rating scales and multiple-choice options were used. The responses to open-ended questions were analyzed both qualitatively, consisting of descriptive statistics, and qualitatively, with free-text responses collated into themes.

The results showed positive changes in **students'** self-reports of changes. The students noted that their most positive experience was helping their friends, classmates and family members more often than before, and that they had stopped getting into fights with each other. The students also stated that they were widely applying the various forms of the Golden Rule in their lives. They also indicated that they had experienced positive changes in playing together, showing respect and obedience to their elders, and being more honest.

Principals and teachers reported positive impact on disciplinary problems, with an overall increased discipline among students along with notable improvement in school attendance. They testified that students showed improved interpersonal relationships with more cooperation among themselves and others. They further noted improvement in honesty, self-confidence, problem-solving and conflict-resolution skills of students.

The Mulyavardhan **Coordinators** stated that they had personally and professionally benefitted from their participation in the Mulyavardhan programme. The Mulyavardhan Coordinators reported improvement in their attitude and emotional management of affairs while at work. They reported an increase in their perspective taking and critical thinking capacity. They also pointed out positive changes in themselves with respect to self-confidence, self-awareness, enthusiasm, time management and their leadership quality.

Mulyavardhan **Teachers** noted that the programme had transformed them, as they had become positive thinkers, more: patient (particularly with students), self-confident and self-aware; punctual, cooperative and disciplined in work; respectful, caring and concerned of others; and their leadership skills showed improvement. They further reported that they applied Mulyavardhan learning not only in the classroom but in the home context as well.

Chapter 3 - Evaluation Methods

In this chapter, we outline the evaluation questions and hypothesis, the evaluation design, data collection procedures, measures, and statistical analysis strategies.

Evaluation Questions and Hypothesis

This evaluation of Mulyavardhan (MV) Programme is guided by the following questions:

1. Is there a difference in values and behaviours of students participating in MV and comparable students not participating in MV?
2. Among students who participate in MV, is Standard (level in school) a significant factor in determining the level of change achieved?
3. Among students who participate in MV, is gender a significant factor in determining the level of change achieved?
4. Among students who participate in MV, is the length of MV intervention (number of years) a significant factor in determining the level of change achieved?

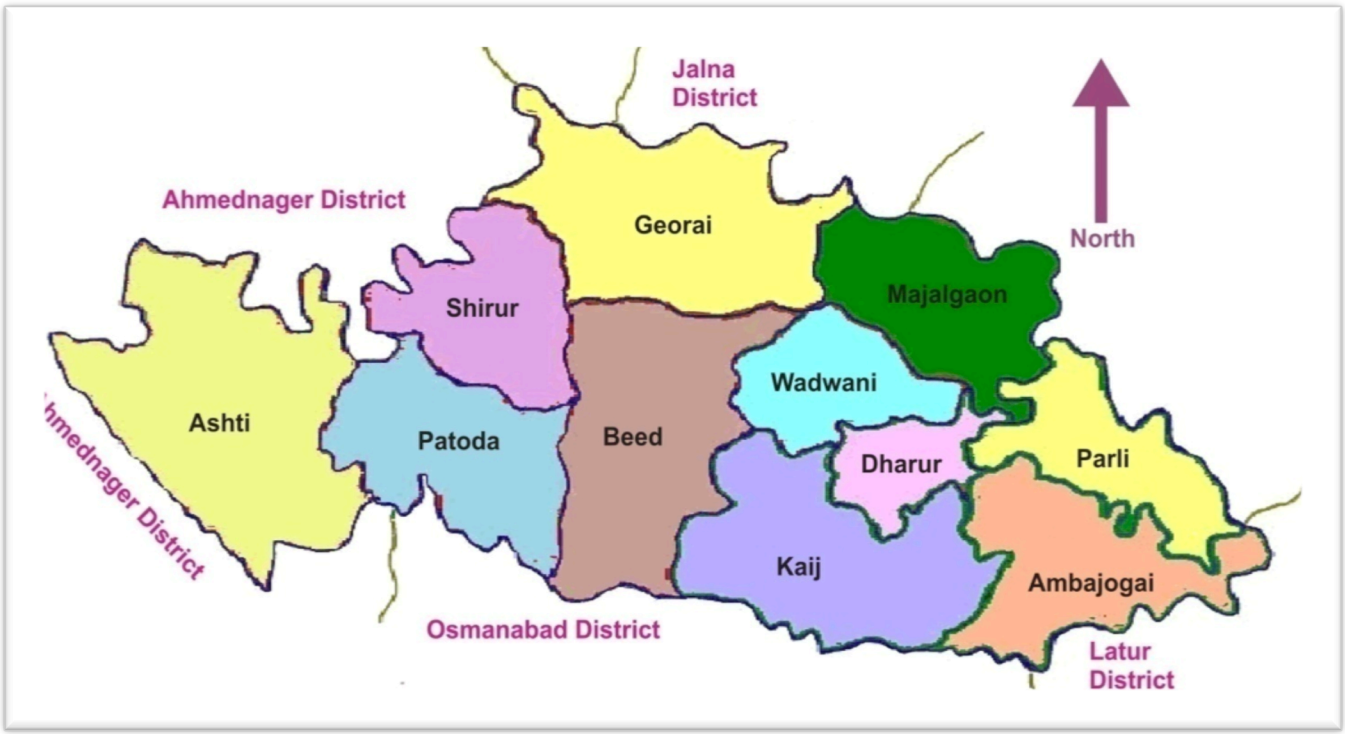
Hypothesis: Students exposed to the Mulyavardhan programme would produce significant positive effects across a variety of values and behavioural outcomes of both boys and girls of Standards I, II, III & IV when compared with non-Mulyavardhan counterparts in comparison schools.

Evaluation Design

This evaluation is quasi-experimental [32] in that schools or students were not randomly assigned to receive the MV programme or not. Two tehsils (Patoda and Ashti: located on the West of Beed tehsil) of Beed district of Maharashtra state were purposely selected for implementation of Mulyavardhan and this evaluation (see map – **Figure 3-1**). All Zilla Parishad schools (for which permission was obtained from the local Government body) in the two tehsils (183 schools in Patoda and in 267 in Ashti) were included for MV. MV was in place since 2009 in Patoda (completed three years of intervention in 2012) and since 2010 in Ashti (completed two years of intervention in 2012). One tehsil, namely Kaij (located east of Beed tehsil), was purposely selected for comparison, being similar to the

intervention tehsils in their socio-economic profile and showing continuity of the same cultural compositions. There are 223 Zilla Parishad Schools in Kaij tehsil.

Figure 3-1: Tehsils of Beed district



Village and School Parameters

Village-school data were compiled for each school in the three selected tehsils. These data were available for 207 Ashti schools, 147 Patoda schools and 179 Kaij schools, and consisted of the following:

Village parameters:

1. Total population of the village
2. Percent of Scheduled Caste population
3. Percent of Scheduled Tribe population
4. Percent literate population
5. Percent of Illiterate population
6. Percent of total working population
7. Percent of population engaged in main (regular, full-time) work
8. Percent of population engaged in marginal (irregular, part-time, distant) work

School Parameters:

9. Residential school
10. Lowest class in school
11. Highest class in school
12. Type of school
13. Shift school
14. Approachable by all weather roads
15. Teaching staff in position primary
16. Number of classrooms for teaching
17. Playground
18. Enrolment of boys in Standards I-IV
19. Enrolment of girls in Standards I-IV

Exclusion Criteria

In order to make the study manageable and the findings somewhat generalizable to primary schools, we excluded schools meeting the following criteria:

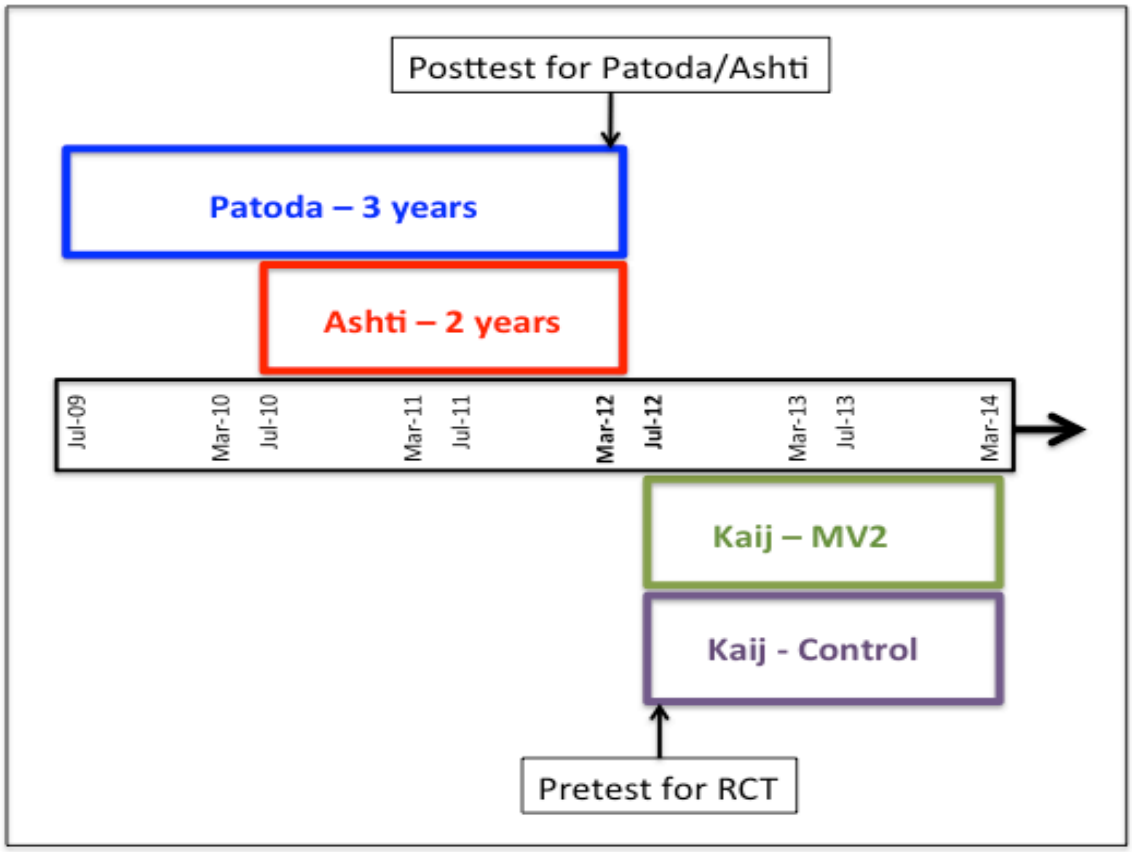
1. Top Standard < IV
2. No students in standards I-IV
3. Not co-education
4. Highest Standard > VII
5. Shift school
6. Not approachable by road in all weather
7. Percent literate > 70%
8. Percent literate < 30%
9. Total working < 30%
10. < 35 students Standards I-IV
11. > 160 students Standards I-IV
12. Percent SC > 35
13. Percent ST > 11
14. Total population > 5000

For the 106 Ashti schools, 62 Patoda schools and 98 Kaij schools that met these criteria, we used k-means cluster analysis to get an initial idea of clusters/strata. Kaij schools were simultaneously selected for a randomized controlled trial (RCT) of a revised version of the Mulyavardhan programme (MV2), starting with pretest/baseline data collection in 2012. For this purpose, we formed comparable Kaij schools into 40 matched pairs and then randomly assigned them MV2 or control conditions. The plan was to use baseline data from

all 80 selected Kaij schools as the comparison condition for the quasi-experimental evaluation. We selected 30 comparable schools from each of Ashti and Patoda.

The research design is summarized in **Figure 3-2**. Programming started in Patoda schools in July of 2009 and Ashti schools in July of 2010. Data were collected from Patoda and Ashti schools in March 2012. Kaij schools were randomly assigned to participate in a randomized controlled trial (RCT) of MV2 starting in August 2012, when pretest data for the RCT (and for the comparison group for the quasi-experiment) were collected in July 2012.

Figure 3-2: Summary of Research Design



Data Collection

The Data collection commenced in the middle of March 2012 and was accomplished by the middle of April 2012 in 30 selected Mulyavardhan (MV) schools in each of Patoda and Ashti tehsils of Beed district of Maharashtra where the Mulyavardhan programme was in place for the last three and two years, respectively.

Data were also collected from 40 pairs of comparison schools of Kaij tehsil of the same

district where each member of the pair was randomly assigned to either of the two groups of schools (i.e. MV2 schools and control schools) for a true experimental study (randomized controlled trial, RCT) that began in July 2012. The data collected from Kaij schools constituted the baseline data for the RCT and served as the comparison data for the present quasi-experimental study. Data were collected from Kaij schools in July 2012 before Mulyavardhan coaching began in the assigned MV2 schools in August 2012.

BJS research staff trained MV teachers in the data collection process. MV teachers are all fluent in the local dialect and familiar with the socio-cultural milieu. All of them had D.Ed. qualification and had undergone 10-60 days of Induction training in Mulyavardhan. They had one to three years of experience teaching Mulyavardhan. ***The group of MV teachers who undertook data collection in Patoda and Ashti tehsils had not been teaching Mulyavardhan in those schools. They had been shuffled to ensure removal of bias that might occur if they collected data from the same schools where they had been teaching***. A team of two or three MV teachers was assigned to each school for collection of data from students (of I to IV Standards), the parents of about 20 students, teachers and the principal of the school. None of the data collectors had ever met any of the students, parents, teachers or principals of the schools where they collected data before the data collection.

Data collection from Kaij schools was conducted by two groups of MV teachers, where one group was assigned to collect data from control schools and the other one from Mulyavardhan schools. None of the data collectors had ever met any of the Kaij principals, teachers, students or parents before the data collection.

Data collectors provided appropriate questionnaires to Principals and Government teachers with a request to complete them and return within a week. Almost all of them returned completed questionnaires within two days with no or minimal interaction with the data collectors.

MV teachers interviewed parents/guardians in person. “Parents/guardians” refers to the respondent who is either mother/grandmother or father/grandfather who was available at home to complete the interview. ***Many parents needed help to complete the survey, which was provided by the data collectors.***

All the MV teachers were also asked to complete two surveys – a “MV process survey” and the teacher survey - in one sitting. This was accomplished in about two hours. Members of the BJS Research Team provided all training and instructions to all data collectors and supervised all data collection activities. Data were collected separately for each classroom – in smaller schools, this meant separately for students of Standards I & II and Standards III & IV.

Two or three MV teachers administered the student surveys - one read it aloud, and the other(s) supervised the administration. The supervisor(s) moved around the classroom and made sure that every student understood the instructions and the wording of each item, and was filling in their answers at the appropriate space. The whole survey was read aloud to students with each question read aloud twice. MV teachers were trained in the procedure for reading aloud the student survey to the students before they actually did it in the field.

Permissions to conduct the evaluation were obtained from Zila Parishad (the local government) and each school principal. School principals informed the parents.

To summarize, MV teachers collected data from schools other than those in which they taught MV or would teach MV2. This was done under the supervision of Brigadier (Retd) Arun Ambardekar. Other BJS staff then entered the data into Excel spreadsheets (using double-entry) under the supervision of Dr. Sushma Jaswal. Dr. Brian Flay then converted the data to SPSS format, merged MV teacher and student files, cleaned them for analysis, and conducted the analyses.

Data were received from:

- 140 schools -
    - 30 Ashti schools and 30 Patoda schools
    - 80 Kaij schools

- 8,378 students -
    - 53% boys
    - 24% Standard I, 24% Standard II, 26% Standard III, and 26% Standard IV
    - 59% from Kaij, 22% from Ashti and 19% from Patoda

- 2,590 parents (approximately 20 per school) -
    - 58% Kaij, 23% Ashti, 19% Patoda
    - 63% males, of whom
        - 24% reported no schooling, 33% less than 8th, 14% some high school, 15% high-school graduate, 8% some college, and 5% college graduate
        - who reported for 50/50% boys and girls
            - 14% Standard I, 20% Standard II, 29% Standard III, 37% Standard IV

- 439 other Adults –
    - 50% Kaij, 25% Ashti, 25% Patoda
        - 249 were Government teachers (147 in Kaij, 55% male)
        - 130 were Principals (72 in Kaij, 92% male)
        - 60 were MV teachers (in Ashti and Patoda, 52% males)

Collecting and entering so much data was a heroic effort by BJS staff! Some data editing was necessary before they could be analyzed. One very important aspect of ongoing work concerns assigning identification (ID) numbers to each village/school, MV teacher, teacher, principal, student and parent, so that all cases can be linked to each other with minimal error, not only for this one time, but also over time.

Measures

In this section, we report on scale properties of the surveys administered to MV programme and comparison school students and their parents, teachers, principals and MV teachers during the past year. We reported in detail on scale properties and recommendations for changes for the RCT in a prior report [3]. The focus in this report is on reporting scale reliabilities for participants in the quasi-experimental evaluation. Sample surveys are attached in the **Appendix**.

Student Values/Behaviours

Questions were constructed to measure 19 values/behaviours of students that BJS expected would be improved by the MV programme. The same sets of questions were asked of students and their teachers and principals. For the student values/behaviours, Standards III & IV students were asked more items than Standards I & II students. In addition, for some values/behaviours, more items were added for the Kaij schools that will be included in the randomized controlled trial (see separate report on scale analyses including those items). The 19 values/behaviours were: prosocial behaviour, honesty, self-control, respect for teachers, respect for parents, empathy, two scales on responsibility (negative-irresponsible and positive-responsible items), personal hygiene, two scales on bullying (items that it is wrong, and items that it is ok), teasing, helping, two scales on school bonding (attachment to school and disaffection with learning), victimization, motivation to learn, self-esteem and perceptions of school climate.

In the **Table 3-1**, we provide the scale name and then list the number of items asked and the Cronbach's alpha measure of reliability [33] for the two student groups (Standards I &

II and Standards III & IV) and for the three sets of adult respondents (Government teachers, MV teachers, and Principals).

Table 3-1: Reliability of student and adult measures of student value/behaviour scales

SCALE	Standard I & II		Standard III & IV		Teachers, Principals & MV teachers			
	# items	Alpha	# items	Alpha	# items	Teachers	Principals	MV teachers
1. Prosocial	6	0.88	6	0.87	6	0.83	0.84	0.83
2. Honesty	3	0.76	5	0.87	5	0.87	0.93	0.87
3. Self-control	3	0.76	4	0.76	4	0.68	0.82	0.68
4. Respect teacher	4	0.86	5	0.87	5	0.73	0.87	0.73
5. Respect parents	3	0.83	4	0.83		na	na	na
6. Empathy	5	0.76	5	0.76	5	0.72	0.74	0.72
7. Irresponsible	4	0.72	5	0.73	5	0.89	0.87	0.89
8. Responsible	3	0.67	4	0.76		na	na	na
9. Hygiene	5	0.87	5	0.86	4	0.76	0.79	0.76
10. Bullying-1 (wrong)	2	0.68	4	0.82	4	0.70	0.82	0.70
11. Bullying-2 (OK)	3	0.82	4	0.83	4	0.61	0.88	0.61
12. Teasing	3	0.74	5	0.77	4	0.74	0.81	0.74
13. Helping	4	0.84	4	0.80	4	0.80	0.89	0.80
14. School Bonding	2	0.64	2	0.64	2	0.80	0.67	0.80
15. School Disaffection	3	0.72	3	0.72	3	0.66	0.85	0.66
16. Victimization	4	0.71	5	0.70	5	0.79	0.88	0.79
17. Motivated to Learn	4	0.87	4	0.85	3	0.82	0.89	0.82
18. School climate	2	0.65	3	0.75		na	na	na
19. Self-esteem	3	0.81	3	0.78	2	0.57	0.46	0.57
Averages	**3.56**	**0.77**	**4.28**	**0.79**	**4.06**	**0.75**	**0.81**	**0.75**

Student MV Process Questions

Students were asked 6 questions to assess their attitudes towards the MV programme in general and how much they liked various MV activities. This scale has good reliability (alpha = 0.70 for both younger and older students).

Students were also asked to cross out the MV activities that they did not enjoy doing (and to check the ones they did enjoy). These were scored as 1 and 2, respectively (so that higher score means greater enjoyment). The resulting scale had strong reliability for younger students (0.75) and moderate reliability for older students (0.66). Factor analyses of adult responses to these items suggested 3 subscales indicated as teacher-led activities (TL), group activities (GA), and fun.

MV Teacher Process Questions

MV teachers completed a survey of 55 questions about the MV programme training and implementation. Section A used 9 items to assess attitudes toward MV. They had high reliability (0.73). Section B consisted of 15 items about the MV training. With the removal of items 5 and 13, scale reliability was 0.85.

Section C asked MV teachers how often they used the same 12 kinds of activities that students were asked about. The alpha for all items in one scale was low (0.53). Factor analysis of the responses from teachers suggested three factors – teacher-led (alpha = .65), student-led (alpha = 0.57) and fun (alpha = 0.62). Section D asked MV teachers to rate how interested they thought their students were in the 12 MV activities. Again, factor analysis suggested the same factors as for section C: teacher-led (alpha = 0.71), student-led (alpha = 0.62) and fun (alpha = 0.61). Although the alphas for factors 2 & 3 are not great, the scales make sense.

Section E asked 4 questions of MV teachers about their satisfaction with training, monitoring, administration and follow-up of the MV programme. These 4 items created a highly reliable scale (alpha = 0.80). In Section F, MV teachers were asked how much they did activities with parents. These items did not correlate highly.

Parent Survey

A selected group of parents were asked to respond to 45 items, mostly about their child's behaviour. Parents responded to 28 items about their child's behaviour on a 5-point scale: Never, Rarely, Sometimes, Often, Always. Factor analysis suggested four factors: school learning, self-concept, prosocial and negative behaviour. Scale reliabilities (all very good) are shown in **Table 3-2**.

Table 3-2: Parent scales and alphas (N = 2590)

Scale	Alpha
School learning (Items A1, A2, A5, A9, B7, B9, B14)	0.91
Self concept/control (Items A6, A10, B2, B3, B4, B8, B15)	0.91
Prosocial (Items A3, A4, A8, A11, B1, B11, B16)	0.89
Negative behaviours (Items A7, B10, B12, B13, B17)	0.74
Section C positive items	0.90
Section C negative items	0.71
Sections DEF – Parenting	0.90

Section C asked parents if their child had ever done 9 behaviours, 2 negative (alpha = 0.71) and 7 positive (alpha = 0.90). In Sections D-F, parents were asked 8 questions about their parenting practices. They all loaded on one factor/scale of high reliability. Statistics are shown in the summary table for this section.

Government Teachers, MV Teachers and Principals

In addition to answering questions about student behaviours, as summarized above, government teachers, MV teachers and principals ("adults" in the following paragraphs) each answered 52 other questions about their own values and behaviours.

The first 10 questions of the surveys (Section A) asked these adults about their agreement with a series of items about general philosophical values and feelings. After dropping 4 items that had unsound statistical properties, the remaining 6 items (see **Table 3-3**) made up a measure with good face validity, although still low reliability.

Table 3-3: Six items from Section A of the Govt. teacher/MV teacher/principal survey with scale reliabilities

The way we think of ourselves impacts everything we do for ourselves and others.	
Students feel better about themselves when they act in disciplined, responsible, honest & peaceful ways.	
Schools and parents have equal responsibility to impart moral and value education to children.	
Students behave better if they feel good about themselves.	
Students learn better if they are at peace with themselves.	
When you treat others as you wish you be treated, it helps you to think of positive actions	

	Govt. Teachers	MV Teachers	Principals
Alphas	0.35	0.64	0.5

Section B consisted of 20 items about how the behaviours of students affect their ability to learn. Although these items could make a single scale with very high reliability (0.91), factor analysis suggested that 19 of the items formed 3 reliable scales (**Table 3-4**). One item (#20) did not load on any particular scale. As shown in the table, all three scales have strong reliability.

Table 3-4: Scales about behaviours of students that affect ability to learn

	Govt. Teachers	MV Teachers	Principals
Social Skills	0.88	0.80	0.93
Sense of self/control	0.84	0.83	0.96
Mental Health	0.94	0.74	0.93

Section C asked adults to rate how much responsibility they believe schools have in teaching values to students. A scale formed from 11 items had high reliability (0.81 for teachers, 0.88 for Principals and 0.75 for MV teachers).

Teachers are often reluctant to discuss negative behaviours with students. Six items in Section D asked if the respondents had ever discussed substance use and violence, as well as some positive behaviours, with their students. Collapsing these items into one scale leads to a reliable scale (0.76 for teachers, 0.79 for Principals and 0.68 for MV teachers.

Ashti (N = 109) and Patoda (N = 111) Government teachers also rated their villages on 43 items. These formed four reliable factors (color-coded in **Table 3.5**):

1. Village problems/poverty (alpha = 0.87),
2. Community stability (0.74),
3. Family wealth/stability (0.84), and
4. Family poverty (0.73).

Comment on Measures

Our analyses of these data from Ashti, Patoda and Kaij schools led to recommendations for items to be dropped, some items to be modified, and some additions to each survey for the posttest administrations in the RCT[24]. The number of these was relatively small and will not affect the length of the surveys and, therefore, the time it takes for respondents to complete them.

Overall, given the lack of opportunity to pilot these surveys before their use, we managed to create a remarkably reliable set of surveys.

The 19 scales correlated moderately with each other. Therefore, after making adjustments so that all scores would be on the same 1-4 scale, and higher scores would always mean more positive (or less negative) behaviour, we also created one "Single Factor" score (the average of all 19 scales).

Statistical Analysis Strategies

The statistical analyses of outcomes must take account of several characteristics of these data. First, we need to consider differences between the sets of villages/schools. Although Percent SC (Scheduled Caste) and ST (Scheduled Tribes) were the only population-level

characteristics significantly differentiating the sets of schools, variability in village populations and rates of illiteracy and working levels might also be predictors or covariates of outcomes. School sizes and numbers of teachers might also predict student behaviour. Thus, the first step in analysis was to determine the covariates to be included.

Table 3-5: Village characteristics survey items and scales

#	Item
1	This is a close-knit neighborhood.
2	People know each other.
3	There is a good sense of community.
4	There is easy availability of Paan &Beedi.
5	There is drinking in public.
6	Families tend to live here for a long time.
7	Families tend to migrate seasonally for economic reasons.
8	There is high consumption of liquor.
9	There is lot of domestic violence.
10	People use abusive language in public.
11	Most of the families suffer due high consumption of liquor.
12	Families are interested in the education of their children.
13	Most families spend on celebrations/festivals beyond their
14	Most families spend on marriages beyond their means.
15	Most of the families are poor.
16	Most of the families do not have a stable source of income.
17	Most people are functionally literate i.e., can read and write.
18	Most parents use verbal abuse to discipline their children.
19	Most of the families prefer sons over daughters.
20	Most of the families possess arable land.
21	Family land holdings are not large.
22	Family income from land is not sufficient for sustenance.
23	Family income is supplicated by doing other jobs.
24	Most of the families have a television set.
25	Very few families own a four wheeler.
26	Bicycle is the commonest means of transport.
27	Condition of road-link to the main road remains bad all year.
28	Electric supply to the village is not steady.
29	The Road-link to the main road is not metal or coal-tar.
30	Most of the families use mobile phones.
31	A Few families have computer/laptop.
32	Internet facilities are available in the village.
33	Health facilities are available in the village.
34	Bank facilities are available in the village.
35	Post-office facilities are available in the village.
36	Water is drawn from the wells.
37	There is acute water scarcity during summers.
38	Electric fans are usually used in homes during summers.
39	Local technology/material is used in construction of homes.
40	Most of the homes have not more than two rooms.
41	There is lot of crime.
42	Houses are well maintained.
43	Vandalism (defacement of Govt/private property) is a problem.

Second, students are nested within villages/schools, and villages/schools are the level where delivery of the programme and assignment to getting the programme or not

occurred. This means that students within villages/schools are not statistically independent – that is, they are more likely to be more similar to each other than to students from other villages/schools. Thus, the real N of analysis is the N of villages/schools rather than the N of students. However, multi-level or hierarchical analyses allow us to still utilize the individual-level data, but with adjustments for the smaller N of independent units.

The "Mixed Model" module in SPSS (Version 20) was used for outcome analyses. School ID was entered as a random effect at the "subjects" variable (= subjects at the cluster level). All potential predictors/covariates were entered as covariates and as main effects at the "Fixed Effects" level. For the reported results, no other "Random Effects" were included, as entering a population-level factor as a random effect did not change the pattern of results or the significance levels. For outcome analyses, quasi-experimental condition was entered as a "Factor" and interactions with the covariates checked and removed if non-significant.

To aid in interpretation and comparison with other findings, we also calculated a measure of effect size called "percent relative improvement" or %RI. This is simply the average score for the MV group minus the average score for the comparison group divided by the comparison group score. For example, if the average scores for the MV and comparison groups were 3.0 and 2.5, respectively, the %RI would be (3-2.5)/2.5*100 = 20%, and it would indicate that MV students scored, on average, 20% better than comparison group students.

To put the resulting effect sizes into perspective, the convention in the literature is to think of a %RI of around 10% as small, 20% as moderate, and 30% as large [4]. Average effect sizes for school-based social-emotional learning (SEL) programmes in studies in developed countries are about 10% for positive social behaviour and academic performance, and about 22% for specific SEL skills [5]. A well-known programme with many positive effects, *Positive Action*, has an average RI of about 15%, considered moderate to large.

Chapter 4 - Sample Characteristics

In this chapter, we report on the characteristics of our samples of schools, students and teachers.

Villages

Table 4-1 shows the characteristics of the villages and schools. Study schools were in small rural villages with an average population of 1264, ranging from only 346 to over 10 times that (3992). Thirty to 70% of these populations were illiterate (significantly higher than the state average of 17.09% [6]), and only 20-60% had regular, fulltime work. The schools were correspondingly small, ranging from one to 8 classrooms, and slightly less than one half had playgrounds. The number of students in Standards I-IV and, thus, eligible for the study, ranges from 36 to 173 (average = 84). The average number of teachers was 2.81 (range 1-6), teaching in 1-8 classrooms (average 3.72).

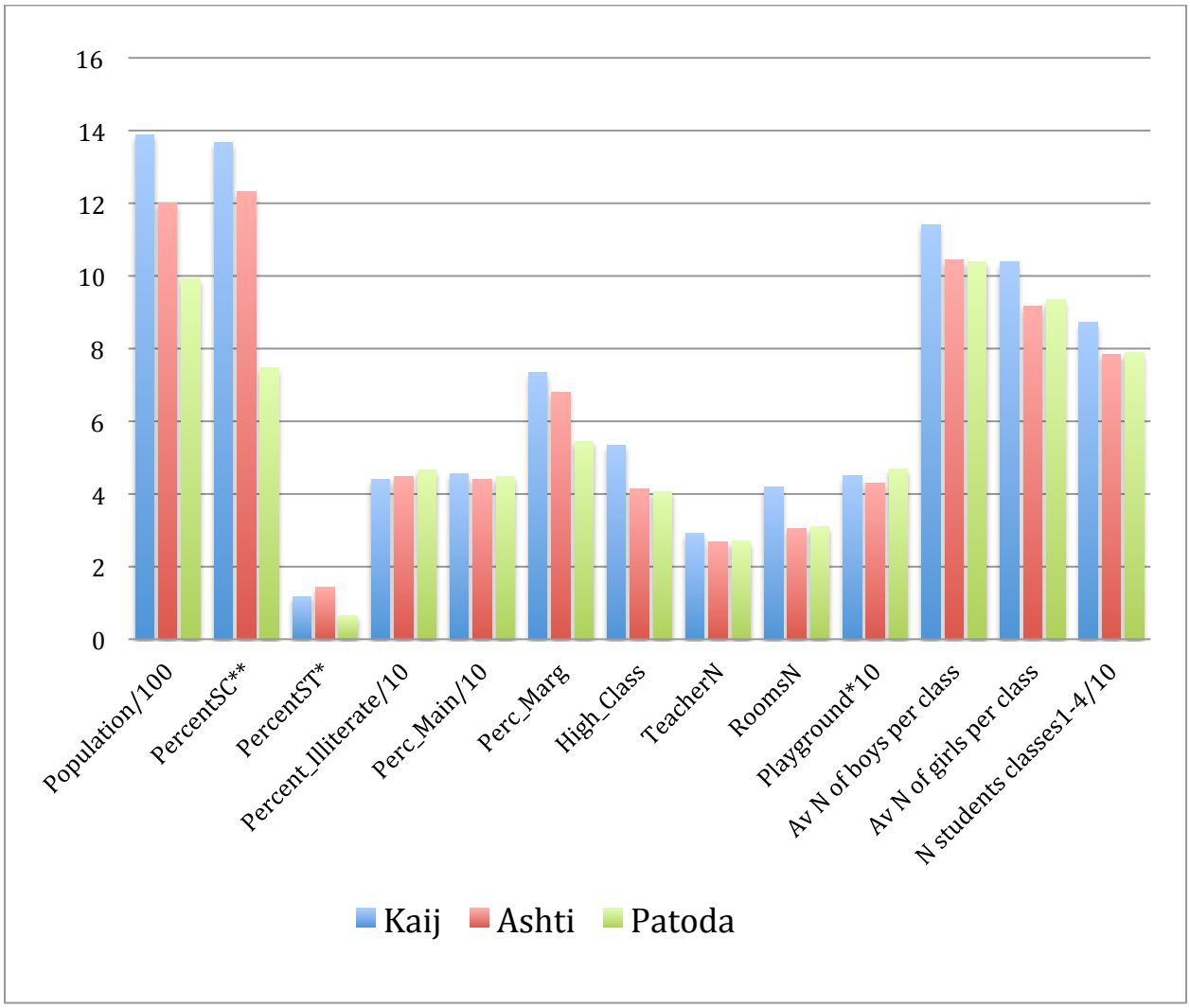
Table 4-1: Village/school characteristics

Village/School Characteristics	Minimum	Maximum	Mean	Std. Dev.
Population	346	3992	1264.06	669.19
Percent SC	0	34.71	12.05	7.53
Percent ST	0	10.08	1.11	1.90
Percent Illiterate	30.15	69.95	44.73	6.70
Percent Main Work	20.73	58.33	45.07	8.15
Percent Marginal work	0	42.25	6.82	7.37
Highest Class	4	7	4.80	1.27
Teacher N	1	6	2.81	0.96
Rooms N	1	8	3.72	1.85
Playground	0	1	0.45	0.50
Av N of boys per class	3.75	23.5	11.02	4.75
Av N of girls per class	3	19.75	9.94	4.22
N of students in classes 1-4	36	173	83.81	34.50

Figure 4-1 shows the comparability of the 3 sets of villages/schools. The only statistically significant differences between these sets of villages (shown with asterisks) concerned the percentages of scheduled caste and scheduled tribe residents, with the highest numbers of these in Kaij (13.6% and 1.16%, respectively) and lowest numbers in Patoda (7.5% and

0.65%, respectively).Kaij schools tended to be a little larger than Patoda or Ashti schools on average, but this difference was not statistically significant.

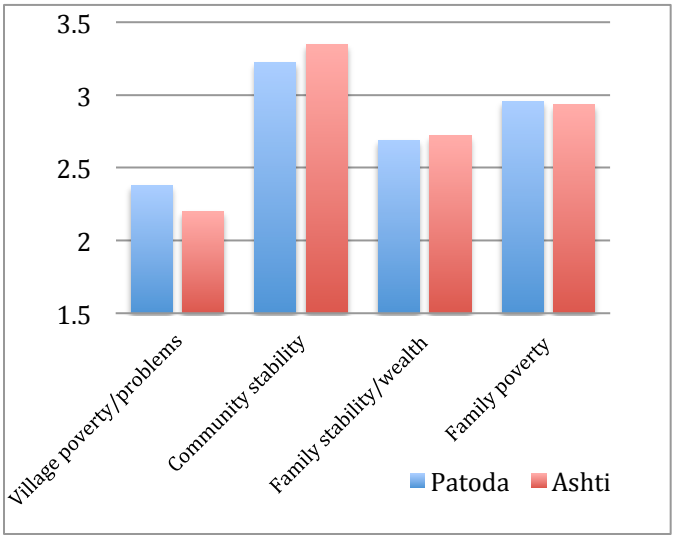
Figure 4-1: Baseline comparability of Kaij, Ashti and Patoda villages/schools



Teacher ratings of Ashti and Patoda Village Characteristics

Ashti and Patoda teachers rated 43 characteristics of their villages that formed four scales. Mean scores on the four scales are shown in **Figure 4-2**. ***Ashti was rated as significantly better on two of the scales – as having lower village problems/poverty (2.2 vs. 2.38, RI = 7.5%) and having more community stability (3.35 vs. 3.22, RI = 4%)***. The two family variables did not differ.

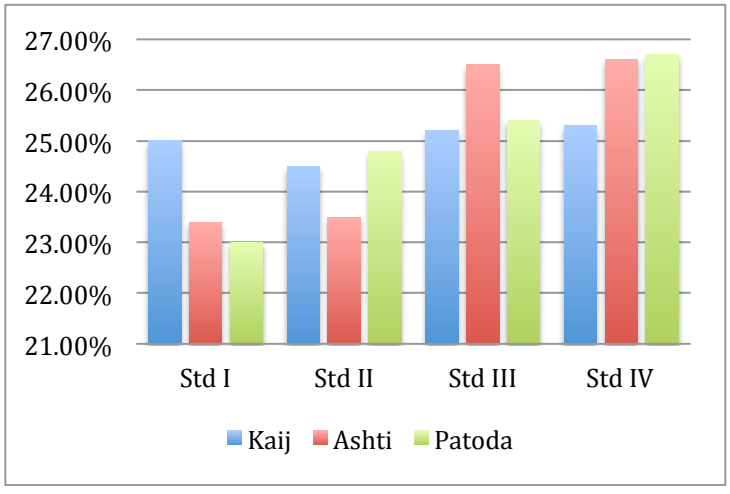
Figure 4-2: Teacher ratings of villages on four scales



Students, Parents and Teachers

Of the students, 53% were boys (47% girls); 24% were in Standard I, 24% in Standard II, 26% in Standard III, and 26% in Standard IV. A higher proportion of the students in Kaij were girls (47.8%) than in MV schools (45%) and this was true across classes. A higher proportion of students in Kaij than in MV schools were in lower classes and a higher proportion of students in MV schools than in Kaij schools were in higher classes (see **Figure 4-3**).

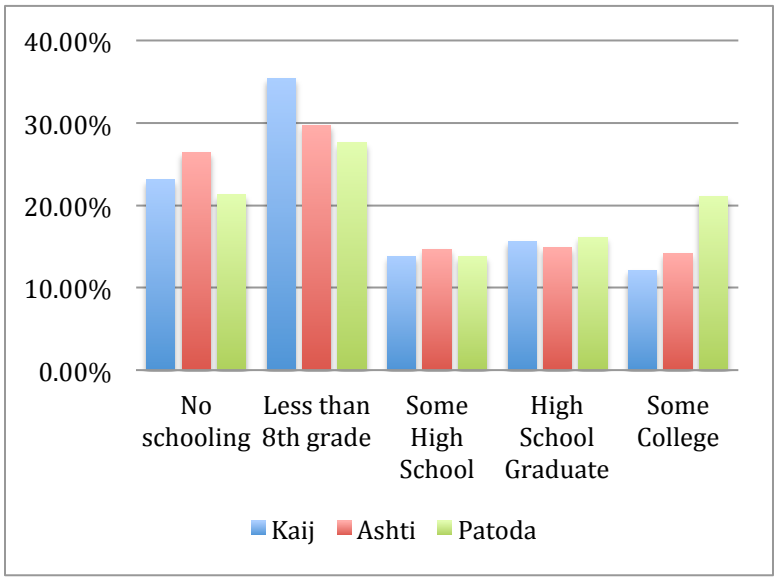
Figure 4-3: Proportion of students by condition and class



Of the 2,590 parents or guardians (approximately 20 per school) who answered surveys, 63% were males (mostly fathers), of whom 24% reported no schooling, 33% less than 8th, 14% some high school, 15% completed high-school, 8% some college, and 5% college graduation. They represented the parents or guardians of equal numbers of boys and girls, but the distribution of those students by standard was biased significantly toward older students - 14% Standard I, 20% Standard II, 29% Standard III, and 37% Standard IV.

Parents of Kaij students were more likely than others to have less than 8th grade education, and parents of Patoda students were more likely to have some college education (see **Figure 4-4**).

Figure 4-4: Proportion of responding parents by condition and education level

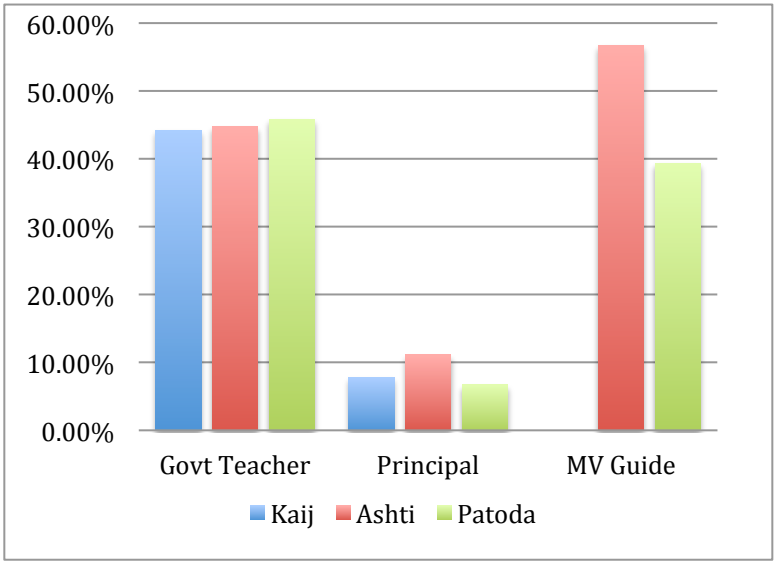


Of the 439 other adults who completed surveys, 249 were Government teachers (55% male), 130 Principals (92% male) and 60 MV teachers (52% male). ***MV teachers in Ashti were more likely to be female (and live in or near the village in which they taught MV) than in Patoda (or teachers in Patoda were more likely to be male)*** **(see Figure 4-5).** Of all of the differences between schools by condition, this one has, perhaps, the greatest potential for influencing programme effects.

Baseline Differences in Kaij Villages/Schools

Prior to data collection, Kaij villages/schools were formed into matched pairs using archival data from 2011 (those used for **Table 4-1** and **Figure 4-1**) and then randomly

Figure 4-5: Proportion of adult respondents who are female by condition



assigned to receive the MV2 programme or to be controls starting in July 2012 - in preparation for a randomized controlled trial. To be of most value to the quasi-experimental evaluation, it is important that there be no differences between these two groups of schools. We already saw that there were no differences on the variables used for matching. However, before analyzing the effects of the MV programme, we first compared the Kaij schools assigned to MV2 and control conditions for the RCT on all outcome variables (the scores on the scales reviewed above).

For student data, analysis of all 19 scales and the Single Factor score ***found significant differences between MV2 and Control schools in Kaij, with an average RI of 11% in favor of the MV2 students***. This was an unexpected finding and appears to be due to an "expectation" being set up in the MV2 schools by their Principals and/or teachers, or by the MV teachers who collected the data. One check on this possible explanation is to look at 5 MV2 schools (and their matched pairs) for which MV teachers could not be recruited and which, therefore, will be dropped from the randomized trial. For these 10 schools, the differences were zero.

Parent ratings of student values/behaviours showed patterns similar to student reports, but more extremely – an average 17% difference in favor of MV2 students. Teachers' ratings of student values/behaviour showed a reverse, but smaller, pattern – teachers in school assigned to MV2 rated students, on average, 3.7% lower than students in schools assigned to the control condition.

These patterns of data led us to look more closely at the 35 pairs of schools remaining after

the 5 schools assigned to MV2 for which an MV teacher could not be recruited, together with its matched control schools, were dropped from further consideration. For the remaining 35 pairs of schools, the average difference in student ratings was reduced a little - to 9.7%. Parent data showed a much sharper reduction – to an average difference of 8%. The difference in teacher ratings was cut in half – to 1.8%.

These patterns of data – major differences between schools assigned randomly to the MV2 or control conditions of the upcoming RCT, with small, though still significant differences, in the 35 pairs of schools - mean that the most appropriate comparison for the quasi-experimental evaluation is with only those 35 Kaij schools assigned to the MV2 condition that will actually receive MV2*. This is similar to adjusting for any pretest/baseline differences if one had such data available for the MV schools in Ashti and Patoda. We, therefore, used the pretest/baseline data from the 35 Kaij schools assigned to start receiving MV2 in July 2012 as the comparison set of schools for the following analyses. In this way, we adjust for the "expectation" effect that, no doubt, was present in all MV schools at the time of data collection.

Figure 4-6[2] shows the differences between 35 MV and 35 matched control schools in Kaij on the 19 outcome variables. We use the same scaling for the y-axis here as we will use for as later figures to make comparisons easier.

Discussion of Sample

This evaluation took place in high-poverty, rural schools in the state of Maharashtra. The rural schools had few resources, and comparison schools were likely to have few outside visitors or special programmes.

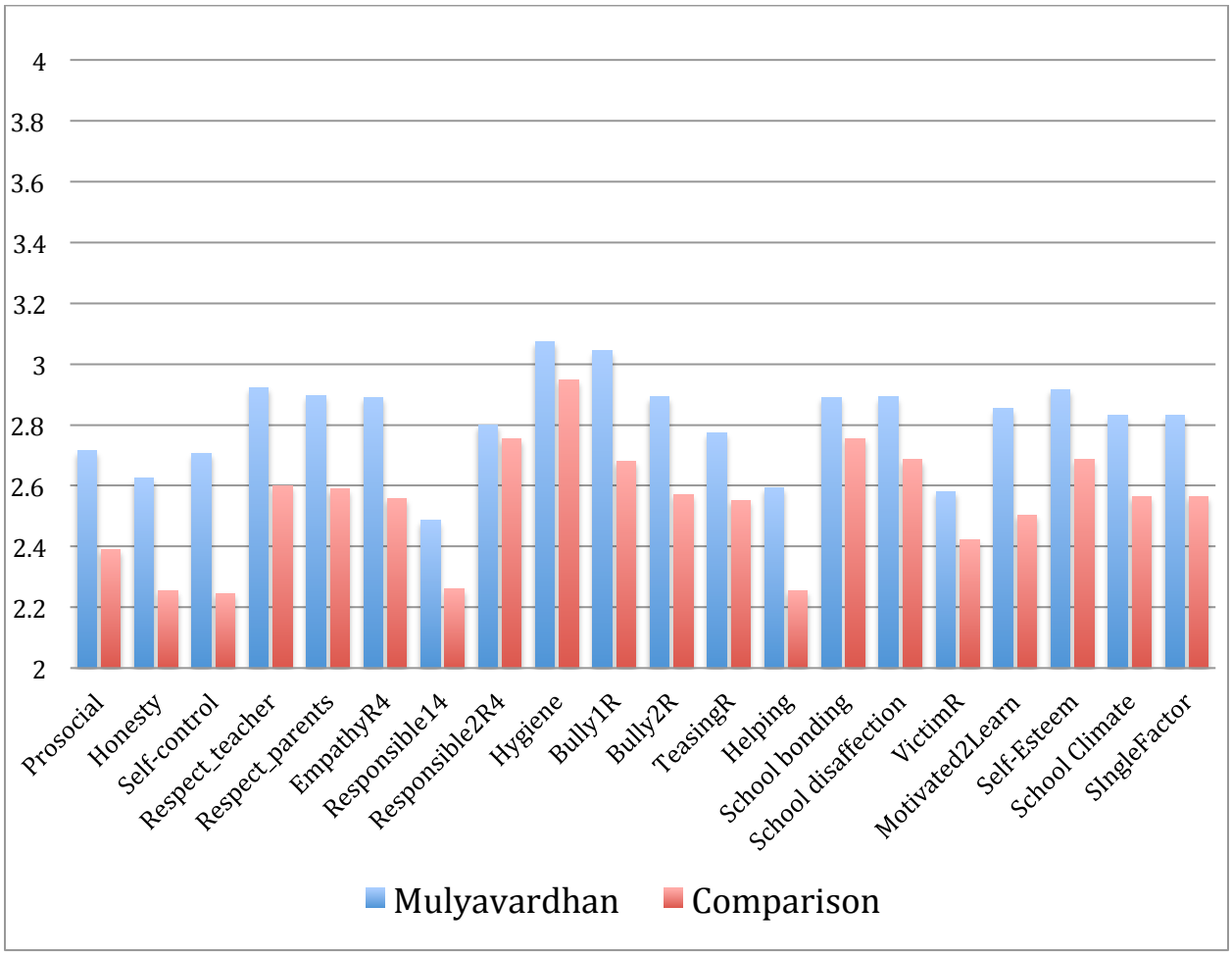
In Kaij, students and parents in schools assigned to receive the MV2 programme rated their values and behaviours better than students and parents in schools assigned to be controls for the RCT. This was an unexpected finding that led us to decide to use only those schools assigned to MV2 as the comparison schools for this quasi-experimental evaluation.

Patoda and Ashti schools and villages were also found to differ. Government teachers rated Patoda villages as having significantly more problems and poverty than Ashti villages. MV teachers in Ashti were more likely to be females who lived in or near the

[2] R after the variable name indicates the scale score was reversed. 4 after the variable name indicates that the scale score was transformed to be on the same 4-point scale as other variables.

village in which they taught MV. These differences will be important in interpreting findings.

Figure 4-6: Baseline student scores on values in 35 pairs of Kaij schools by condition



Chapter 5 - Process Results

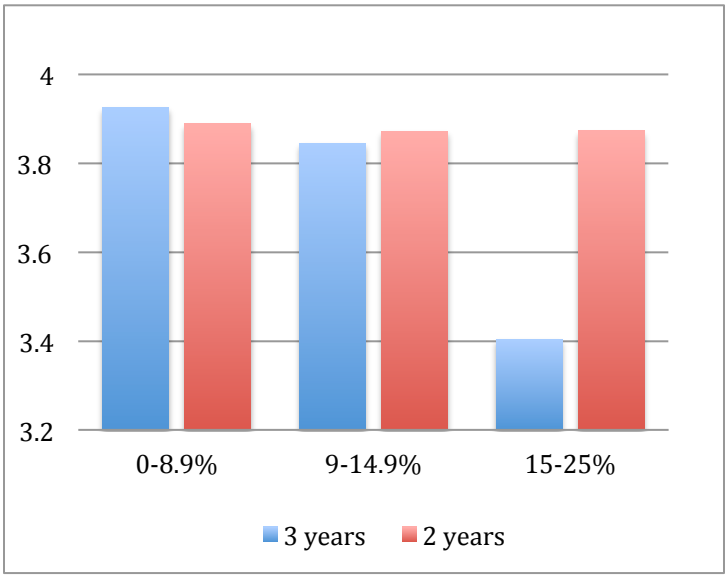
In this chapter, we report the results from the process survey questions asked of students and teachers.

Student Process Results

Students responded to questions about how much they liked the MV programme, and then checked the specific activities they liked. ***On a 5-point scale, students generally liked MV a lot (mean = 3.97)***. There were statistically significant differences between Ashti (2 years of implementation) and Patoda (3 years of implementation). Ashti students liked the programme a little more than Patoda students (means = 3.88 and 3.86, respectively).

There was a statistically significant interaction with percent scheduled caste in the village. **Figure 5-1** demonstrates this, showing that students from Patoda villages with higher percentages of SC liked the programme (after 3 years) a lot less than students from Ashti villages with higher percentages of SC (after 2 years).

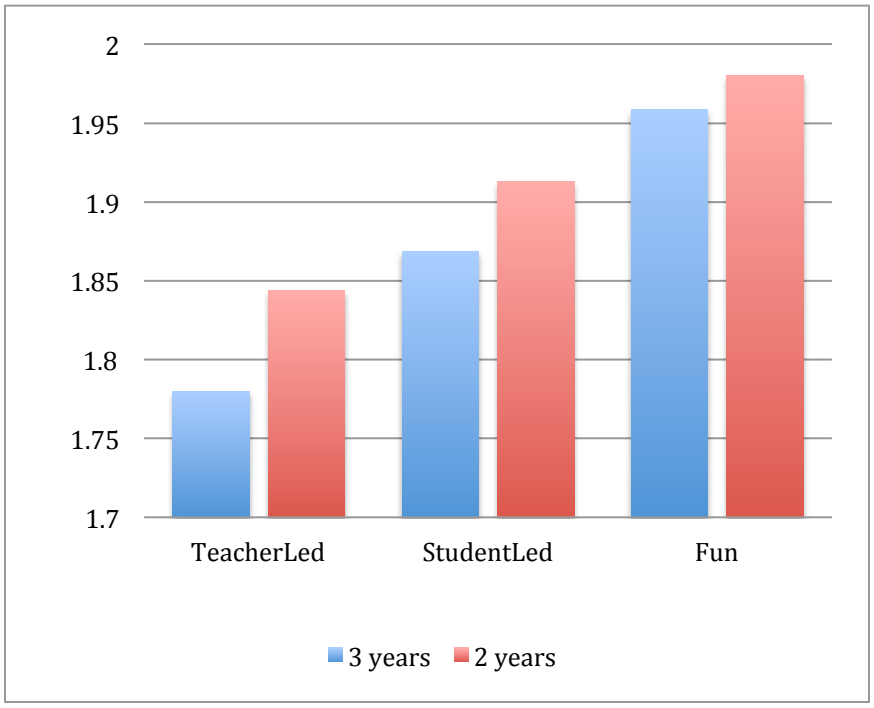
Figure 5-1: Interaction of condition with %SC (tertiles)



On a 2-point scale (no vs. yes) most students also liked all of the MV activities (mean = 1.88 or 88% responding yes). Students, not surprisingly, generally liked fun activities the

most and teacher-led activities the least (see **Figure 5-2**). The differences between Ashti and Patoda were greatest for teacher-led activities and of smaller magnitude for student-led and fun activities. ***More students from Ashti than from Patoda liked the activities (means = 1.91 and 1.86, or 91% vs. 86%, respectively).***

Figure 5-2: Student liking of MV activities

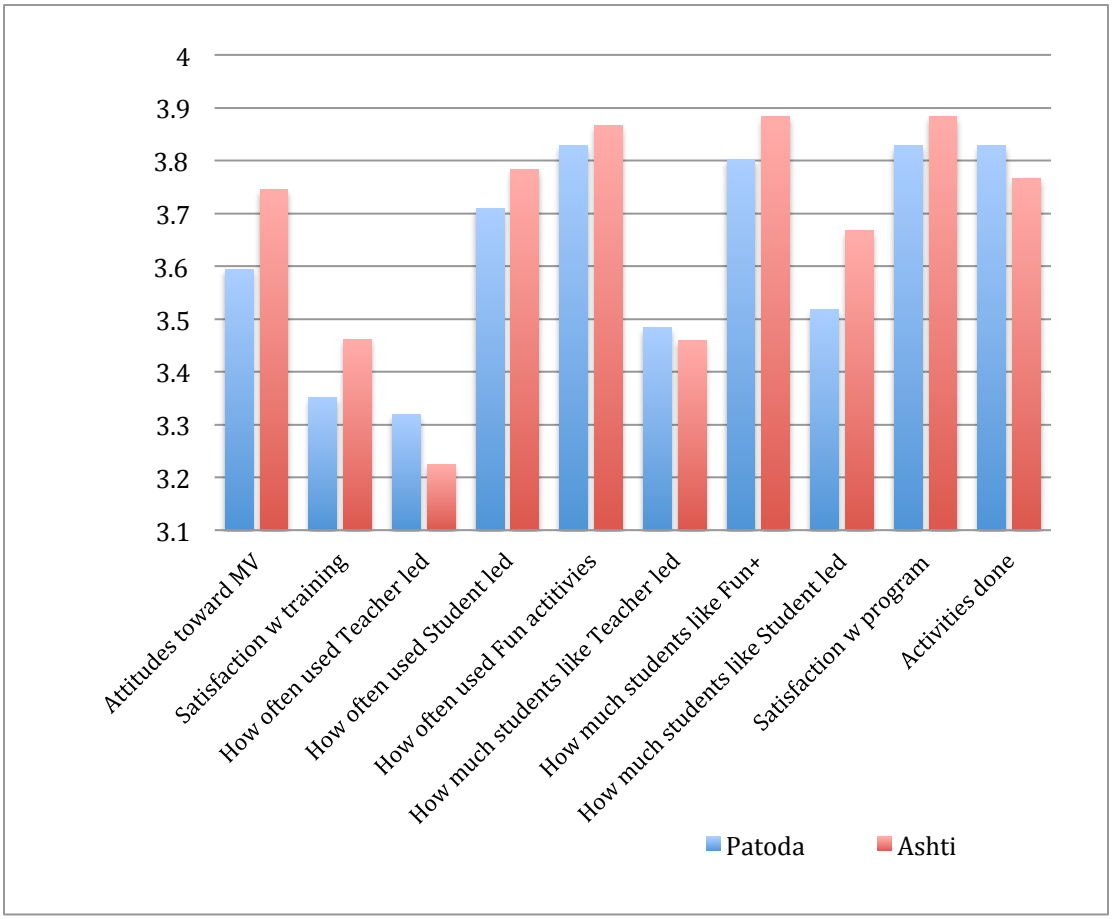


MV Teacher Process Results

MV teachers from Ashti and Patoda schools completed a process survey that formed 10 reliable scales. Their scores are shown in **Figure 5-3**. For some scales (e.g., attitudes toward MV, satisfaction with training), there were differences that, consistent with student data, favored Ashti (2 years).

On 4-point scales, MV teachers generally felt positive about the MV programme. However, scores on satisfaction with training and use of student- led activities were lower than on all other scales. Scores on attitudes toward MV and how much students liked teacher-led activities were moderate. ***MV teachers trained for Ashti were more satisfied with their training and had more positive attitudes about MV than teachers trained for Patoda.***

Figure 5-3: Scores on MV Teacher Scales



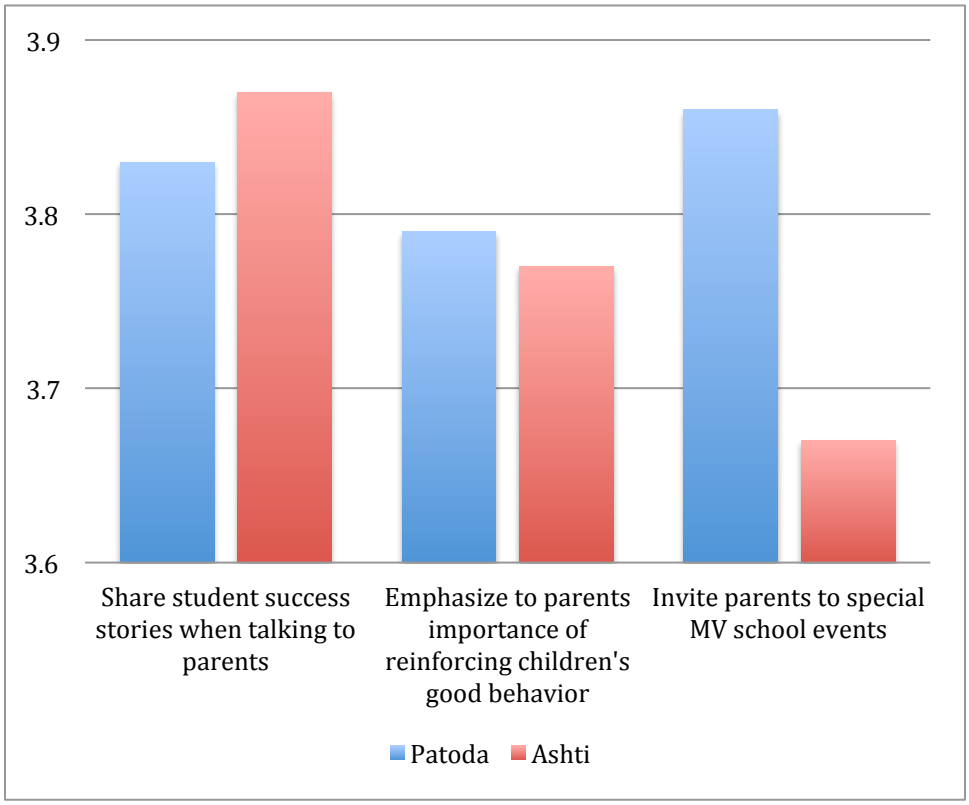
The three items in the "activities done" scale did not fit together very well, so it was worth looking at the individual items. **Figure 5-4** shows that the small difference between Ashti and Patoda on the "activities done" scale was due to a statistically significant difference on inviting parents to MV school events. ***MV teachers in Patoda (during the 3rd year of MV) were more likely to invite parents to MV school events during 2011-2012 than MV teachers in Ashti (during the 2nd year of MV).***

Comment on Process Results

Students and MV teachers generally reported very positive attitudes toward the MV programme and the activities in it. On a 5-point scale, students generally liked MV a lot (mean = 3.97). On a 2-point scale (no vs. yes) most students also liked all of the MV

activities (mean = 1.88 or 88% responding yes). More students from Ashti than from Patoda liked the activities (means = 1.91 and 1.86, or 91% vs. 86%, respectively).

Figure 5-4: MV Teacher Scores on "Activities Done" Scales



However, ***contrary to expectation, neither students nor teachers rated the programme better after 3 years (in Patoda) than after 2 years (in Ashti). This effect was particularly strong in villages with high proportions of scheduled castes.***

On 4-point scales, MV teachers generally felt positive about the MV programme. ***MV teachers trained for Ashti were more satisfied with their training and had more positive attitudes about MV than teachers trained for Patoda.*** MV teachers in Patoda (during the 3rd year of MV) were more likely to invite parents to MV school events during 2011-2012 than MV teachers in Ashti (during the 2nd year of MV).

Extended Comment on Level of Values Education in MV and Comparison Schools

BJS collects ongoing monitoring data from MV teachers on how much and how well they deliver the MV curricula lessons, how many parents they visit, meetings with the school

principal, etc. Unfortunately, these data were not available to us for this evaluation. However, personal communications suggest that ***the Mulyavardhan programme is implemented at very high levels, both in amount and quality.***

This is very different from the integrity of programme implementation in evaluations in the United States, where it is difficult to get enough time during the school day to fully implement an experimental programme [34]. In addition, regular classroom teachers are usually expected to deliver these programmes, and many are not motivated to do so at a high level of quality. The result is poor implementation and, therefore, small effect sizes can be expected.

Another process difference between this study and those in the United States and other developed countries concerns what schools assigned to comparison or control conditions are doing. Most schools in the U.S. already offer some form of health promotion, social-emotional learning, character development, or values education. Thus, there is no such thing as a pure comparison or control condition [34]. Personal communications suggest to us that ***the comparison schools in this study probably did very little or no values education during the period of this study*** – that is, they were a pure "no-treatment" comparison group.

These differences in U.S. studies cut the possible effect size. On the bottom end, effect sizes are cut by 20-50% because comparison/control schools are delivering some material similar to the programme being evaluated. In addition, programmes are rarely implemented with the regularity and integrity that the Mulyavardhan programme appears to have been. Lack of integrity in programme implementation in the U.S. could cut the possible effect size on the top end by 20-50%. Finally, as noted above, the special nature of the Mulyavardhan programme could lead to an increased effect size in the current study. Thus, the possible effect sizes when the Mulyavardhan programme is evaluated in rural Indian schools with dedicated teachers could easily be double those found in the U.S.

Chapter 6 - Outcome Results

In this chapter, we report outcome results for student-, teacher- and parent-reports of student values/behaviors.

Student Data

Predictors of Behaviour

The first level of analysis is to check for predictors of values/behaviour in the absence of the MV programme. These analyses were run on only the 35 comparison schools. The correlations of all predictor variables with the "Single Factor" outcome variable are shown in **Table 6-1**. The correlations suggest that older students (higher Standard levels) will score better, higher village population will correlate with lower scores, %SC but not %ST correlates with lower scores, percent with marginal work will correlate with lower scores, and multiple indicators of school size, including having more girls in the school, will predict lower scores.

Table 6-1: Correlations with "Single Factor" outcome in 35 comparison schools

Gender	0.00
Class/Standard	0.11
Village population	-0.10
% SC	-0.31
% ST	0.04
% Illiterate	0.08
% Regular Work	-0.01
% Marginal Work	-0.08
Highest standard	-0.44
N of teachers	-0.21
N of Classrooms	-0.35
Playground	-0.04
Boys N	-0.07
Girls N	-0.13
Students N	-0.10

Table 6-2 shows, the best-fitting statistical model included class/standard, having a playground, and percent employed in marginal work. Student gender (sex), village population, %SC, the number of girls were left in the model despite their marginal significance because of their cultural importance and strong bivariate correlations. Other indicators of school size dropped out of the model once village population and the number of girls were added – and the resulting model was a better fit to the data.

Table 6-2: Fixed effects model without condition

Parameter	Estimate	Std. Error	df	t	Sig.
Intercept (MV)	2.622	0.121	86.003	21.608	0.000
Class	0.051	0.004	4272.960	13.503	0.000
Sex	0.014	0.008	4234.872	1.646	0.100
Girls N	-0.015	0.011	79.744	-1.355	0.179
Playground	0.136	0.061	127.005	2.236	0.027
Population	0.000124	0.000	68.388	1.656	0.102
Percent SC	-0.006	0.004	232.903	-1.495	0.136
% Marginal Work	-0.016	0.004	280.515	-4.189	0.000

The "estimates" in **Table 6-2** can be interpreted as follows. The intercept is the estimated value for boys in Standard 0 (if such a thing existed) in the comparison schools. Girls would score slightly better (0.014 points) than boys, but having more girls in the school would lower the scale. The scores would increase an average of 0.051 points per year/Standard, while having a playground would improve it 0.136 points. Students in villages with larger populations would, on average, have higher scores (0.1 per 1,000 people), but higher proportions of scheduled castes and marginally employed would lead to lower scores. The sig. column indicates that class, having a playground, and percent marginally employed are significant predictors at conventional levels ($p < .05$), and the other factors are all marginally significant ($p < .20$), but left in the model because of their possible importance.

Student Outcomes

The final model for the "Single Factor" outcome is shown in **Table 6-3**. Recall that the Single Factor score is an average of all of the other scales. The primary finding is of the strong significant effect of condition, indicating that having the MV programme adds almost a whole point to the Single Factor score. In this model, the intercept of 3.532 represents the estimated score for MV students and the estimated score for control school students is 0.905 points less (2.627), with all other variables set to their means.

Note that in this model, all of the covariates left in the prior model are now essentially statistically significant, thus supporting the decision to include them. All of the estimates or

coefficients for the covariates are similar to what they were in the prior model, suggesting that they will predict larger or smaller scores accordingly.

Table 6-3: Fixed effects model for "Single Factor" with condition

Parameter	Estimate	Std. Error	df	t	Sig.
Intercept (MV)	3.532	0.076	134.951	46.520	0.000
Class	0.053	0.003	7225.182	19.414	0.000
Sex	0.018	0.006	7195.568	2.933	0.003
Girls N	-0.014	0.007	126.547	-1.958	0.052
Playground	0.090	0.040	227.149	2.232	0.027
Population	0.000102	0.000	130.438	2.197	0.030
Percent SC	-0.006	0.003	322.364	-2.097	0.037
Percent Marg	-0.011	0.003	310.495	-3.594	0.000
QE condition	**-0.905**	**0.055**	**108.134**	**-16.509**	**0.000**

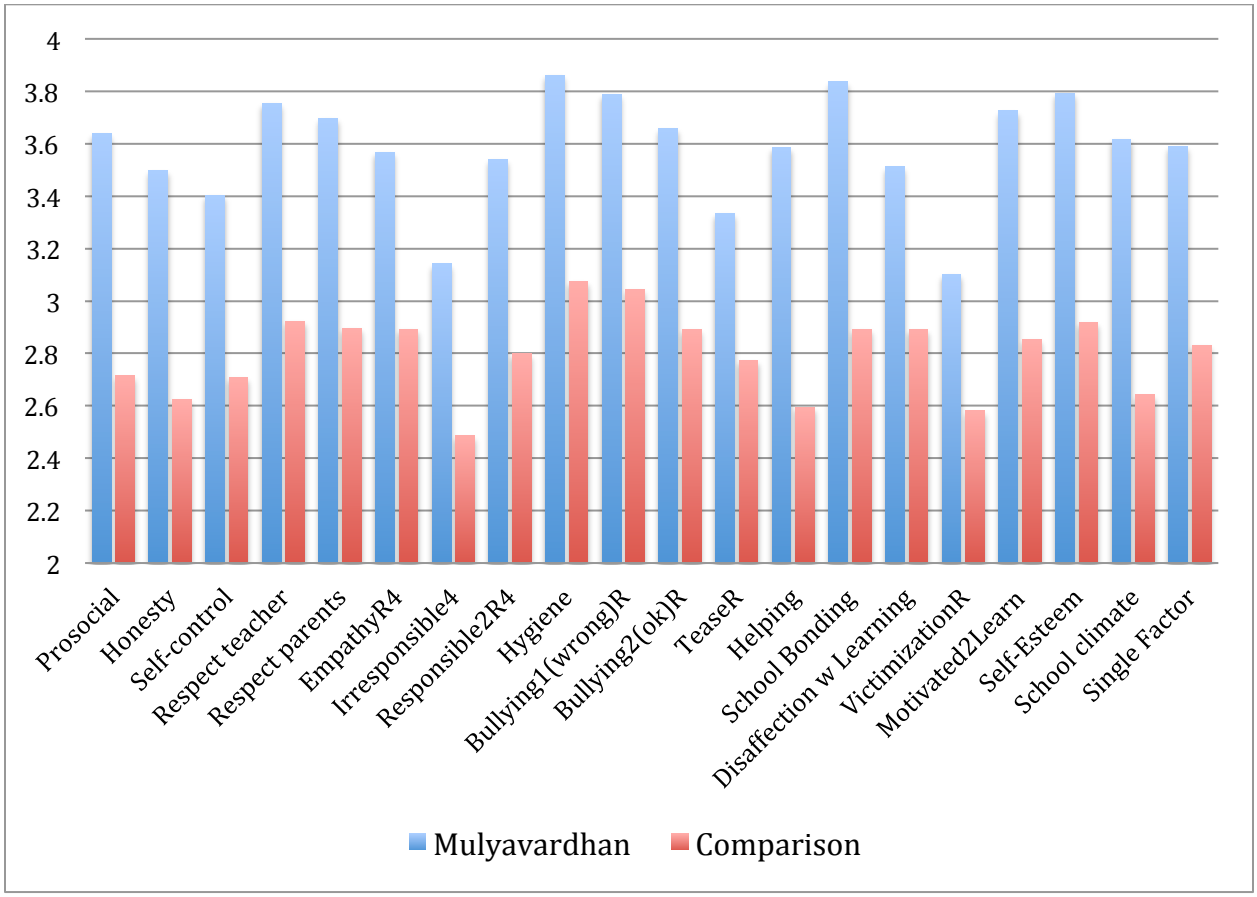
The same models were tested for each of the scale scores. Interactions of condition with all covariates were tested and only significant interactions retained in the final model. **Table 6-4** shows the condition effect estimates for each outcome, together with estimates for the significant interactions with class/standard, and percent relative improvement.

Table 6-4: Condition estimates, interactions and percent improvement for separate student scales

Scale	Estimate	Class interaction	%RI
Prosocial	-1.11		34.04
Helping	-1.19		38.19
Honesty	-1.01		33.29
Self-control	-0.77	-0.044	25.75
Self-esteem	-1.05		30.04
Respect teacher	-1.10	0.510	28.47
Respect parents	-1.02	0.029	27.63
Empathy	-0.75	-0.036	23.40
Irresponsible	-0.55	-0.089	26.42
Responsible	-0.82		26.48
Hygiene	-0.99	0.042	25.64
Bully1 (wrong)	-0.92		24.50
Bully2 (ok)	-0.95	0.027	26.51
Tease	-0.62		20.17
Victimized	-0.39	-0.093	20.21
School bonding	-1.24	0.083	32.71
School disaffection	-0.56	-0.070	21.44
Motivated to Learn	-1.13	0.027	30.55
School climate	-0.84	-0.047	36.89

The average percent relative improvement was a large 28%, although the individual estimates varied between 20% (teasing and feeling victimized) and 37-38% (helpfulness, perceptions of school climate), reflecting differential effects of the MV programme on the outcomes. The programme had its largest effects on a set of self-related outcomes (helping, prosocial, honesty) and a set of school-related outcomes (perception of school climate, school bonding, motivation to learn), and the smallest effects on teasing, feeling victimized and school disaffection, although even these effects were still large by international standards. Results are summarized in **Figure 6-1**[3].

Figure 6-1: Student scores on values/behaviours: MV vs. comparison schools



Interactions with Condition

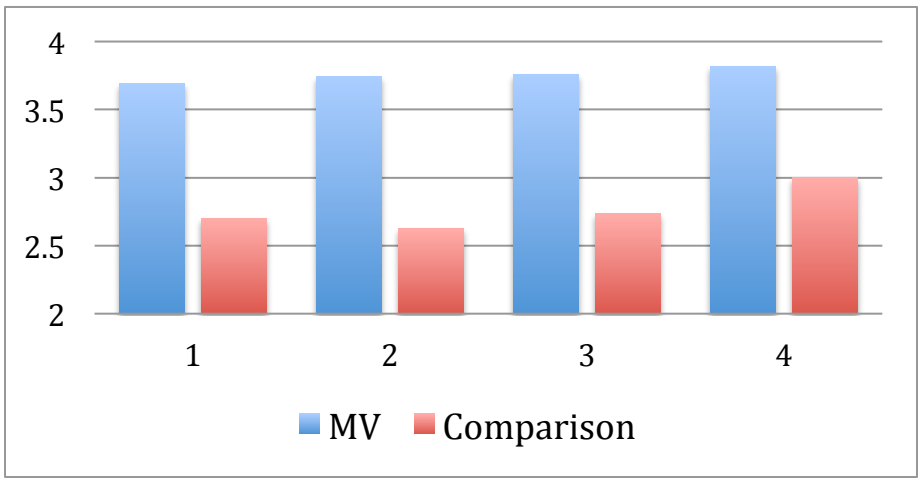
For the "Single Factor" outcome, none of the interactions with condition were significant, suggesting that ***the MV programme was equally effective for boys and girls, for students***

[3] R after the variable name indicates the scale score was reversed. 4 after the variable name indicates that the scale score was transformed to be on the same 4-point scale as other variables.

at different levels (Standards) and in villages with different populations and different kinds of people.

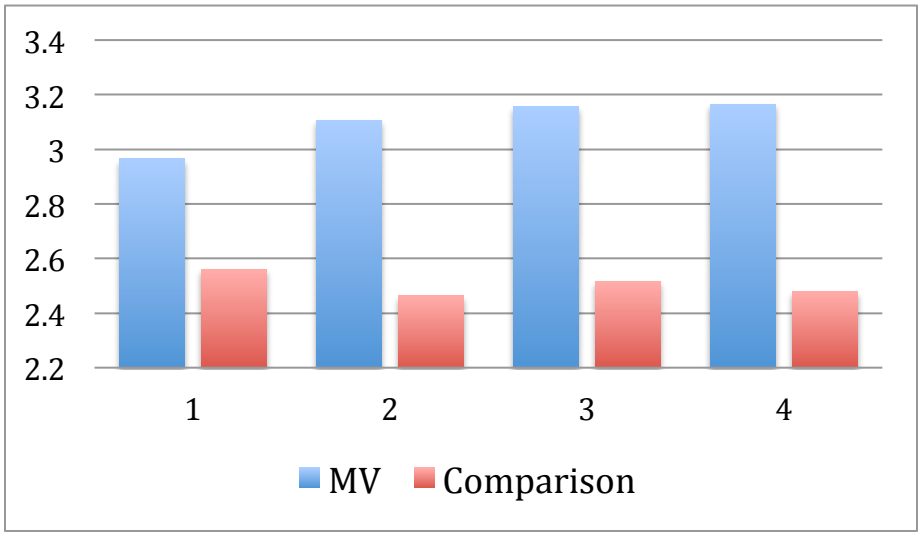
The only variable with which condition interacted significantly in the separate outcome models was class/standard. These coefficients were generally small, however. The largest such effect was for "respect for teacher" illustrated in **Figure 6-2**. For this outcome, MV programme effects were larger for younger students, particularly Standard II (1.11 points larger), and smallest for Standard IV students (0.82 points). A similar pattern, but of lesser magnitude, was apparent for respect for parents, hygiene, bullying, school bonding and motivation to learn.

Figure 6-2: Example of "Positive" Interaction with Class: Respect for Teacher



An illustration of an even smaller effect, but in the opposite direction, is shown in **Figure 6-3**. For feeling victimized, the effect of MV is smaller for younger students, particularly Standard I (0.41 points), and largest for older grades (0.69 points for Standard IV).

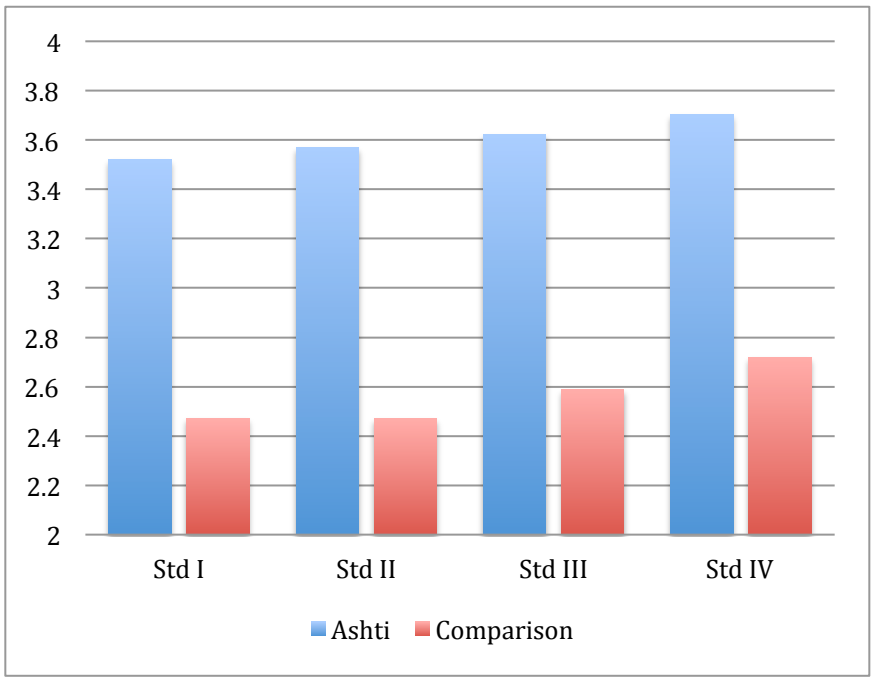
Figure 6-3: Example of "Negative" Interaction with Class: Feeling Victimized



A similar pattern, also of smaller magnitude, was observed for self-control, empathy, responsibility, school disaffection and school climate.

The main message from these models is that the MV programme appears to have been very effective at improving every one of the measured outcomes in the positive direction, equally so for boys and girls and, for most outcomes, for different classes/standards. Nevertheless, there was a suggestion of some differential effects of the programme for different classes; however, these differences were small, especially in Ashti (see **Figure 6-4**).

Figure 6-4: Effects of MV on "Single Factor" by class/Standard in Ashti

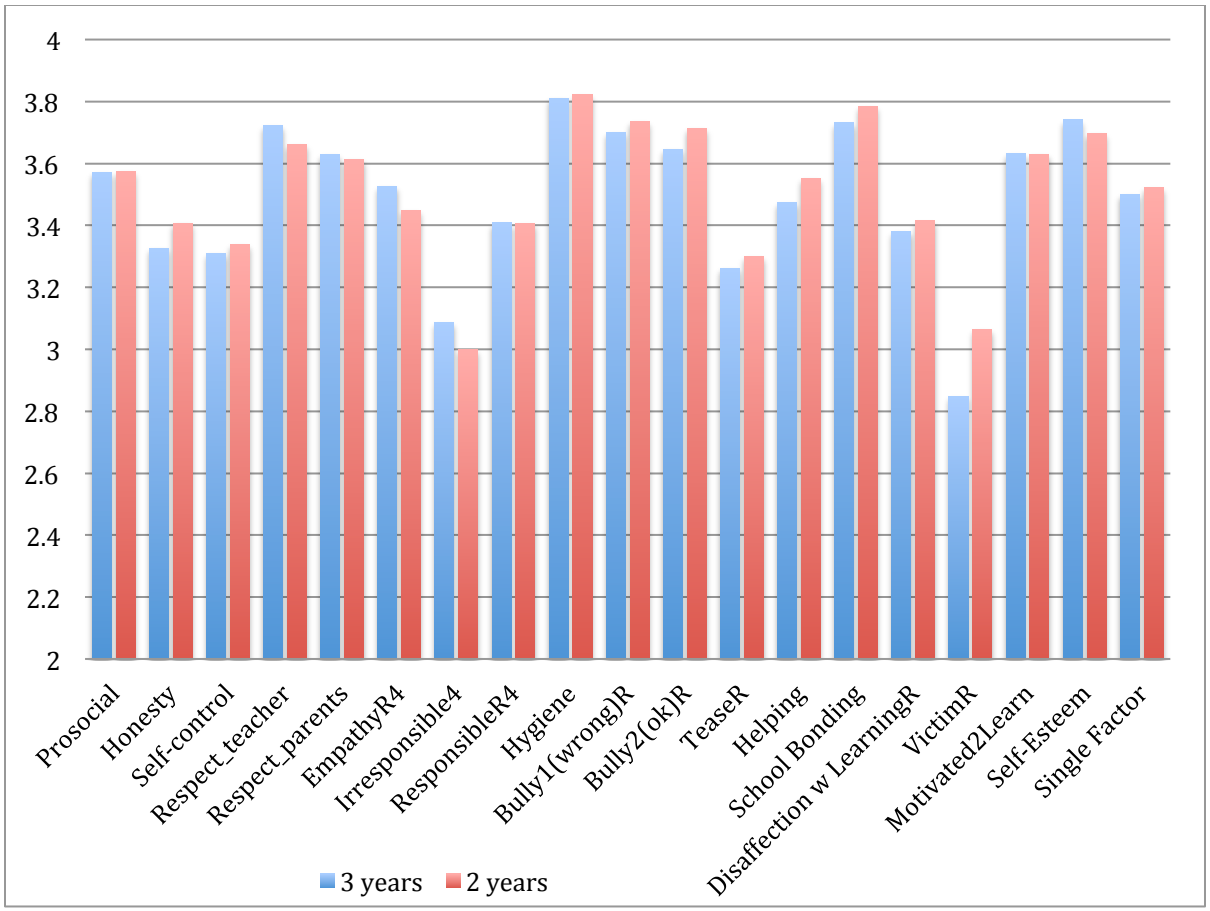


Effects of 3 vs. 2 years of MV on Student Outcomes

Another objective of this quasi-experimental evaluation was to determine how much difference 3 versus 2 years of intervention would make. This is accomplished by comparing results from Patoda (after 3 years) and Ashti (after 2 years). ***Statistical analyses found no statistically significant differences between Ashti and Patoda schools overall.*** This result is illustrated on **Figure 6-5**[4], where the lack of differences is readily apparent.

Figure 6-5: Student Scores on Values/Behaviours: Ashti (2 years) vs. Patoda (3 years)

[4] R after the variable name indicates the scale score was reversed. 4 after the variable name indicates that the scale score was transformed to be on the same 4-point scale as other variables.

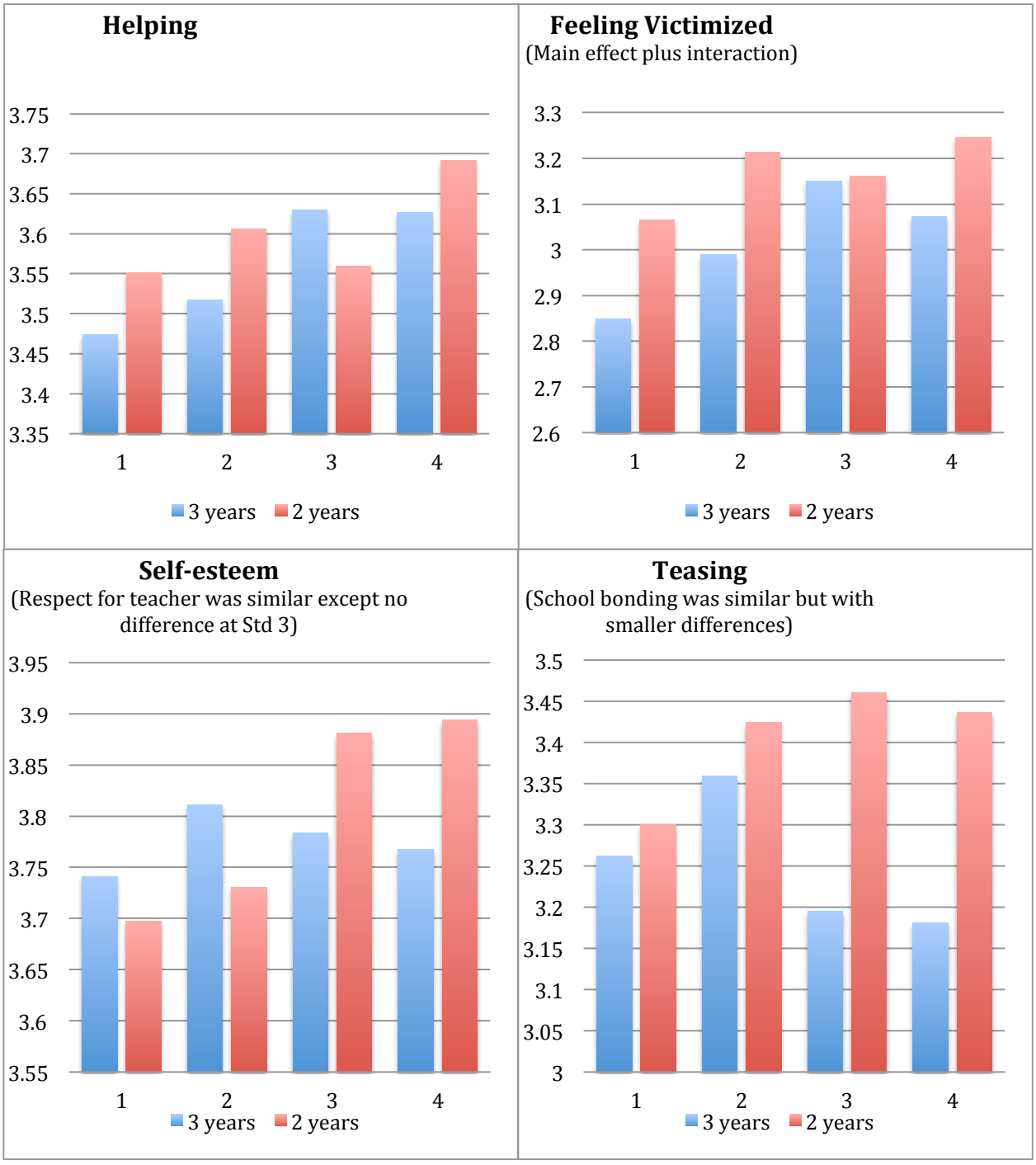


However, there were significant interactions of condition with class/standard. As illustrated in the panels of **Figure 6-6**, interactions mean that programme effects were different for different values/behaviours in the two tehsils by classes/standards. In general, the expected pattern of the MV programme having larger effects after 3 years of implementation (in Patoda) than 2 years (in Ashti) did not occur very often. Indeed, there were more instances of larger effects in Ashti than in Patoda (more of the red bars are higher than blue bars in **Figure 6-6**).

Larger effects after 3 years in Patoda than after 2 years in Ashti did seem to happen for some outcomes in some classes, for example, "helping" with Standard III students, and for "self-esteem" and "respect for teachers" with Standards I and II students.

Smaller effects occurred after 3 years than 2 years for other combinations of outcomes and classes. For example, for Standards III and IV students, smaller effects occurred after 3 years than 2 years for "self-esteem," "teasing" and "school bonding". This occurred for "helping," "feeling victimized" and respect for teacher" for only Standard IV students.

Figure 6-6: Examples of Interactions of Exposure with Class



In addition to the patterns shown in **Figure 6-6**, schools with 3 years of intervention produced larger effects on "empathy" and "irresponsibility" for Standard I students but smaller effects than after 2 years for Standard IV students.

It would be worth examining further the differences between Patoda and Ashti reported above as potential explanations for the lack of superiority of 3 years of MV. Those differences were:

- Ashti MV teachers had received more training, on average, than Patoda MV teachers.
- MV teachers in Ashti were more satisfied with their training than those in Patoda.
- There were more female MV teachers in Ashti than Patoda.
- Teachers in Ashti rated their villages as being better (having fewer problems/poverty and greater community stability) than teachers in Patoda rated their villages.

Discussion of Student Outcomes

Overall, the pattern of outcomes for students was very positive. Large differences were observed between the MV schools (in Ashti and Patoda) and the comparison schools in Kaij. ***The average percent relative improvement was large at 28%.***

The observed MV programme effects were also consistent across types of students (gender and class), schools and villages. This is not a common finding, so can be regarded as very positive.

An unexpected finding was that the effects after 3 years of the MV programme were no larger than the effects after 2 years. The possible explanations for this finding could be the higher proportion of female teachers in Ashti, the higher satisfaction with teacher training in Ashti, and the teachers' ratings of lower levels of problems/poverty in Ashti.

Additional explanations of the pattern of MV effects being no larger in Patoda than Ashti are possible. Perhaps the novelty of MV for Patoda schools was wearing off after 2 years, and additional years of intervention did not increase the size of the effect. For MV teachers, it may be that their teaching became rote and less enthusiastic in the third year.

Teacher Data

Main Effects

Teachers were asked what proportion of their students they thought had/engaged in most of the same values/behaviours that students had reported on. Teachers' responses were on a 7-point scale from "none of them" to "all of them."

Results are shown in **Table 6-5** and **Figure 6-7**. ***The average relative improvement in teacher ratings of student values/behaviour was 10.5%, considerably smaller than for students' own reports or parent reports of their values/behaviours***. There was considerable variation in the effects, from as low as 3% (hygiene) to as high as 21% (responsibility and school disaffection).

Table 6-5: Percent improvement for teacher ratings of student values/behaviours

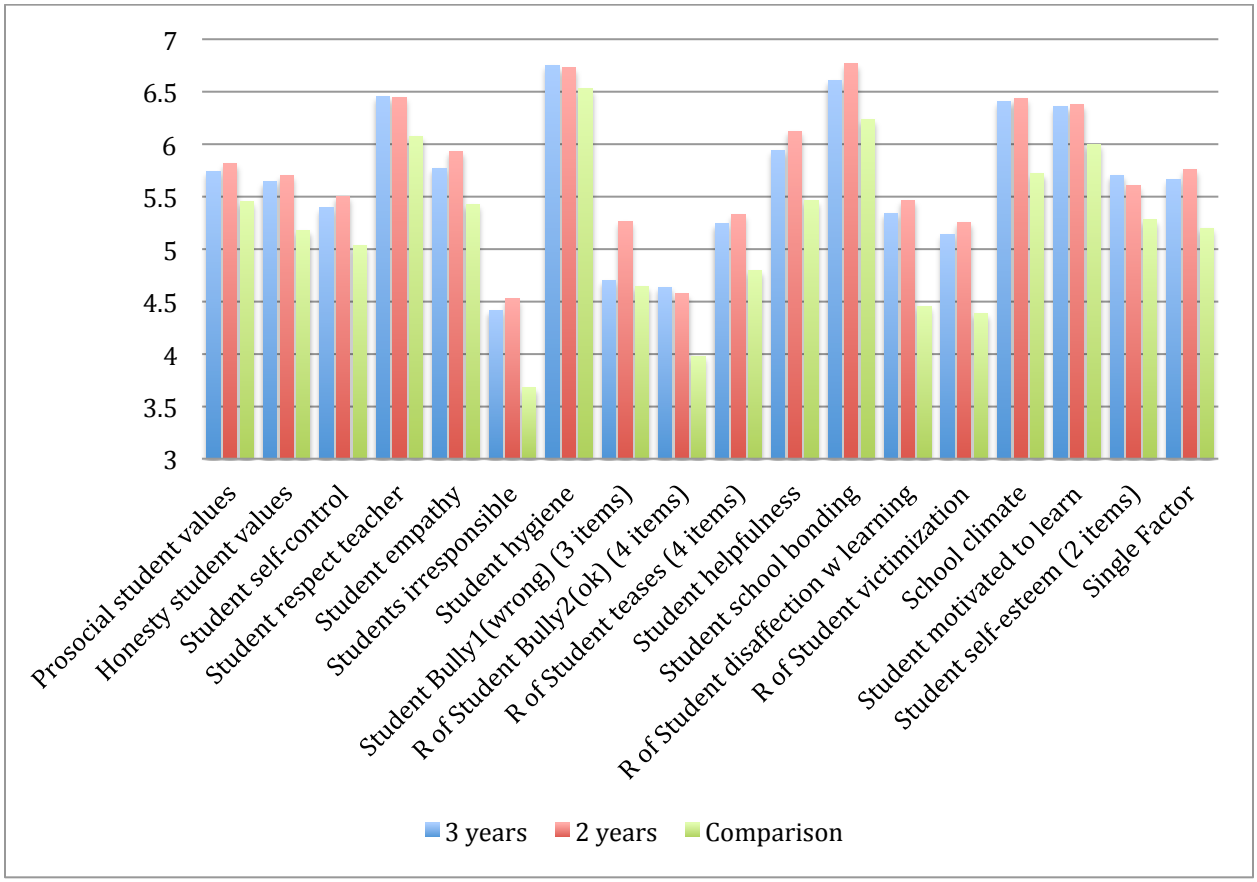
Scale	MV vs C	3-yr vs. 2-yr
Prosocial	6.01	-1.26
Helpful	10.43	-3.02
Honesty	9.61	-1.08
Self-control	8.22	-2.06
Self-esteem	7.20	1.69
Respect teacher	6.19	0.04
Empathy	7.76	-2.63
Responsible	21.50	-2.50
Hygiene	3.27	0.36
Bullying-1 (wrong)	7.18	-10.66
Bullying-2 (ok)	15.82	1.36
Teasing	10.23	-1.74
Victimized	18.63	-2.19
School bonding	7.20	-2.29
School disaffection	21.36	-2.19
Motivated to Learn	6.17	-0.28
School climate	12.29	-0.43

Effects of Length of Exposure

For the "exposure" comparisons, none of the effects were statistically significant and, as with student and parent data, most of the small differences were in the direction favouring Ashti schools (after 2 years of MV) over Patoda schools (after 3 years of MV) see **Table 6-5**

and **Figure 6-7**.

Figure 6-7: Teacher reports of student values/behaviours by condition (Mulyavardhan vs. Comparison) and length of exposure (3 years vs. 2 years)



Discussion of Teacher Reports of Student Values/Behaviour

The average improvement in teacher ratings of student values/behaviour was considerably smaller (10.5%) than for students' own reports (or parent reports – see below) of student values/behaviours. This finding, together with the prior one that Kaij teachers in schools assigned to the control condition for the RCT rated their students better than did teachers in schools assigned to subsequently receive MV2, suggests that teachers are more conservative than students themselves or their parents in their ratings of student values/behaviours - or perhaps they are more realistic. Another possibility is that their limited exposure to the children - mostly only at school during the school day – limits their ability to observe student behaviours or expressions of values. This is compared to the students themselves, who are living their values, or the parents, who see and hear about their children's values and behaviours in more contexts every day.

Parent Data

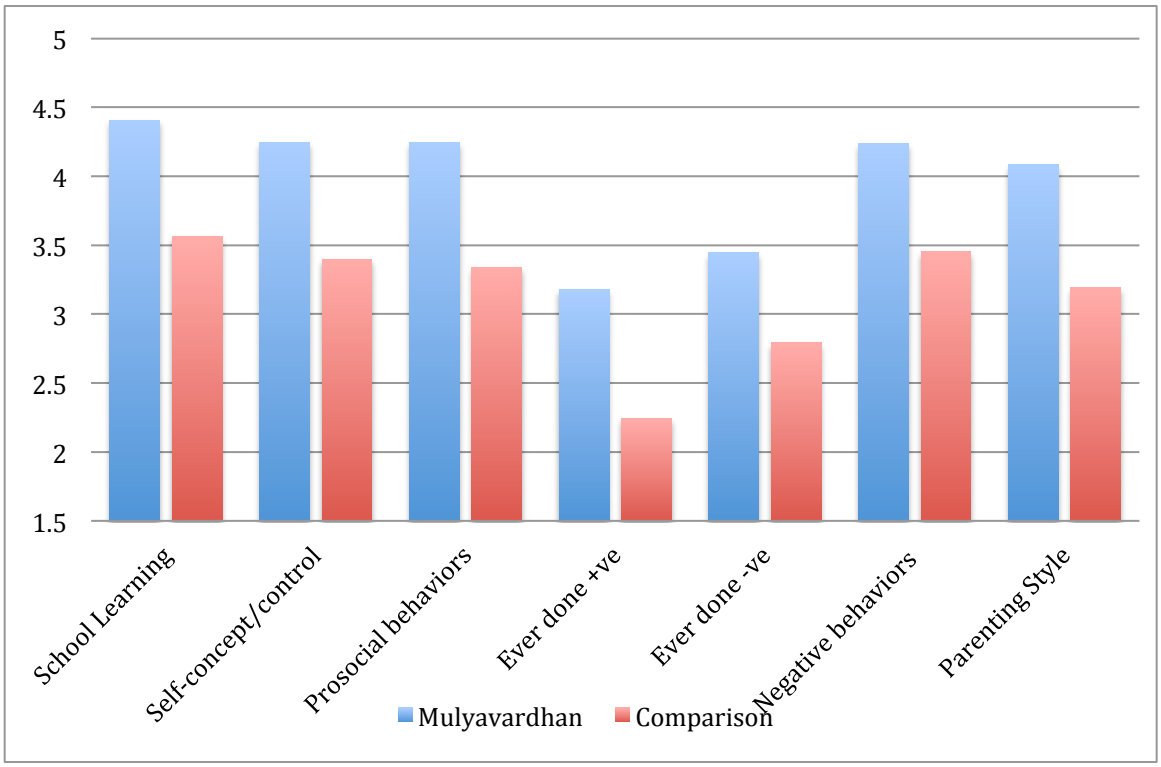
Main effects

Parents answered 45 items that formed 7 scales with strong reliability. Estimates of effects on these scales from mixed models analyses are shown in **Table 6.6**. Mean scores by conditions are shown in **Figure 6-8**.

Table 6-6: Estimates of effects for parent scales

Scale	Intercept	Main Effect	Interaction Education	Effect Sizes
School learning	4.200	-0.931	0.0307	23.66
Self-concept	4.068	-1.028	0.0619	24.81
ProSocial	3.999	-1.020	0.0411	27.20
Negative	4.182	-0.801		22.82
Ever done +ve	3.000	-0.940		41.81
Ever done -ve	4.250	-0.650		23.42
Parenting	3.976	-1.030	0.0481	27.90

Figure 6-8: Parent Scale Scores: MV vs. Comparison

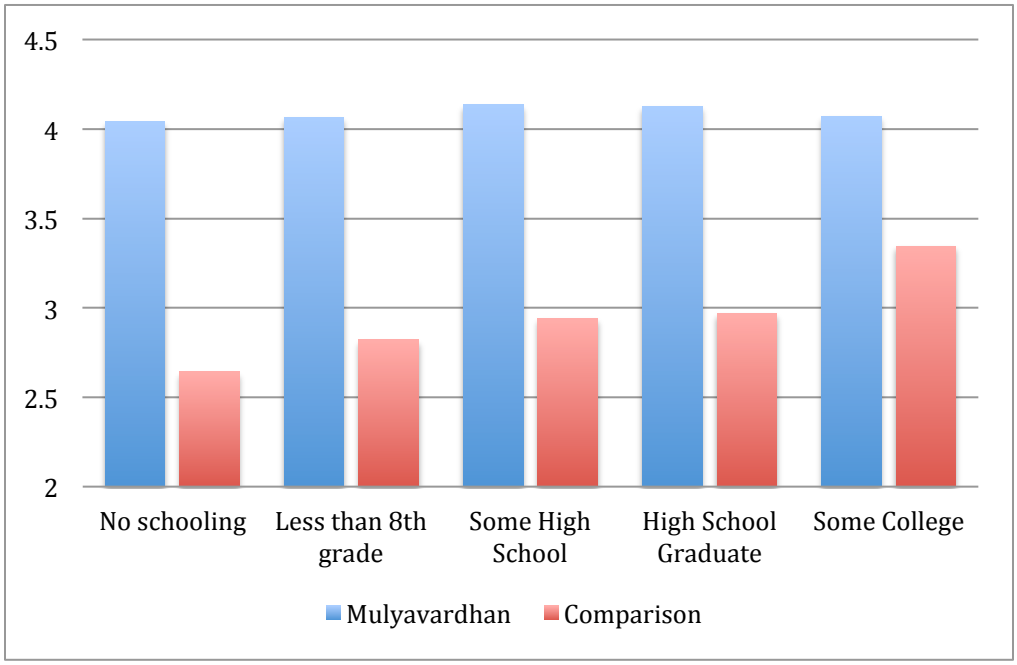


As with the student data, the intercept is the estimated mean for the MV group, the main effect is adjustment to arrive at the estimate for the comparison group, and interaction terms suggest that the effects are different for school learning, self-concept, prosocial behaviour and parenting style by education of the responding parent. ***The effects of the MV programme on parent reports of their child's values/behaviours were large, with an average of 27% relative improvement***, ranging from 23% (negative behaviours) to 42% (positive behaviours), but with most in the 24-28% range.

Interactions

The interactions with parent education were all such that, in the comparison group, better educated parents rated their child's behaviours and their own parenting style better, thus producing a smaller programme effect. **Figure 6-9** illustrates this pattern. For example, the effect for students of college-educated parents is smaller than the effect for students whose parents had no schooling.

Figure 6-9: Interaction of Condition by Parent Education on Parenting Style

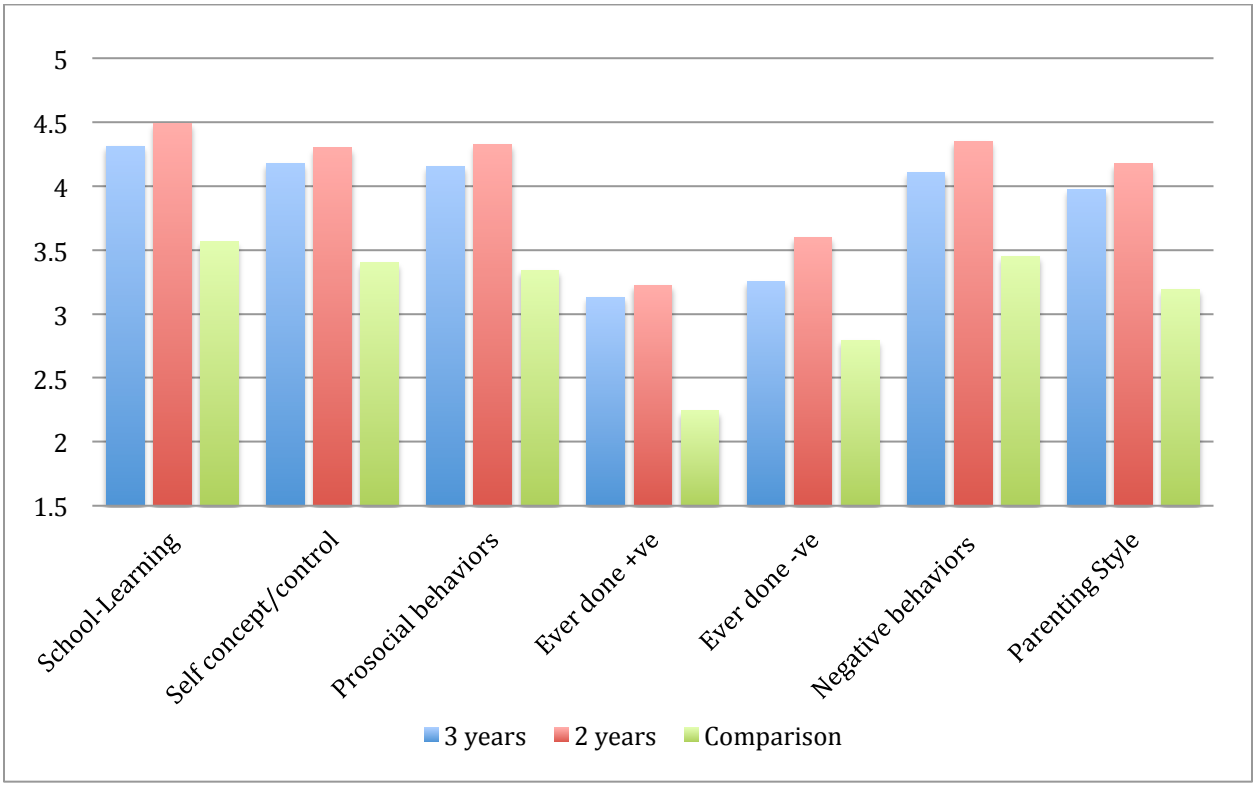


Effects of Length of Exposure

Ashti (2 years) and Patoda (3 years) parents' ratings of student behaviours and their own parenting styles were significantly different, but the differences were relatively small (in

the range of 5%). Just as with students, the differences were in the direction of Ashti being better than Patoda (see **Figure 6-10**).

Figure 6-10: Parent Scale Scores: Length of Exposure vs. Comparison



Discussion of Parent Results

The main effects for parent reports of their child's behaviours and their own parenting styles replicated the student results – 2 years of the MV programme produced large effects and an additional year of MV did not seem to improve the effects.

Indeed, for the parent data, the 2-year effects were significantly larger than the 3-year effects. Although these differences were larger than the students' results after 3 years vs. after 2 years, they were still relatively small.

Parent education was a strong predictor of how they rated their child's behaviour and their own parenting style – and this dampened effects of MV for children of better-educated parents.

Chapter 7 - Discussion

In this chapter, we provide a summary of our findings, describe and discuss the limitations of this study, and provide some conclusions.

Summary of findings

Both students and MV teachers liked the MV programme a lot. Although we do not have data to speak directly to implementation, personal communications suggest that the MV teachers implemented the programme well.

MV teachers in Ashti appeared to be more enthusiastic than their counterparts in Patoda. They were better trained, reported being more satisfied with their training, and were more likely to be female than their counterparts in Patoda. Government teachers also rated Patoda as having more poverty and behavioral problems than in Ashti.

Overall, the pattern of effects of the MV programme on student values and behaviours was very positive. Student-, teacher-, and parent-reports of student values/behaviours showed large differences between the MV schools (in Ashti and Patoda) and the comparison schools in Kaij. The average size of the effect was large by international standards – a relative improvement of 28% according to student self-reports, 27% according to parent reports, and 10.5% according to teacher reports.

On the whole, ***the observed programme effects also seem to be consistent across types of students (gender and class), schools and villages***. This is not a common finding, so is regarded as very positive.

The one variable for which there were some statistically significant interactions concerned class/Standard. These effects were small, however, and not in any consistent direction. Mulyavardhan programme developers and trainers might look closely at these results to determine their implications, if any, for future development and training, although this pattern of effects did not appear to be present in Ashti schools.

An unexpected finding was that the effects after 3 years of the MV programme were no

larger than the effects after 2 years. There are multiple possible explanations of this, including Patoda villages having more problems and being less stable, more Ashti MV teachers being female and being more satisfied with their training, and the novelty of the programme wearing off over time. ***These possibilities deserve further exploration***.

Limitations

The large observed effects need to be interpreted cautiously because of the limitations of this quasi-experimental study. These include the lack of pretest data and the lack of random assignment to condition, so that there may have been unmeasured differences between MV and comparison schools. Therefore, as with any quasi-experiment, there are multiple plausible alternative explanations for the observed effects [32].

The most obvious is that the comparison group is, by definition, non-equivalent, and any measured or unmeasured differences between programme and control sites could explain any differences in outcomes. Evaluators may attempt to adjust statistically for initial differences. However, error connected with measurement can actually introduce statistical bias, and it will not be clear whether the findings were over- or under-adjusted [32].

We labeled another alternative explanation as the "expectation" effect – where the expectations of school principals and teachers, as well as the MV teachers who collected the data, may have subtly (and inadvertently) influenced student responses. We saw that this was likely in Kaij schools assigned to receive the MV2 programme. Indeed, in Kaij, two groups of MV teachers were assigned to MV2 or control schools – this could have led to the bias!

A third possibility is that the effects observed in this quasi-experiment are larger that would have been observed in a true experiment (randomized controlled trial). This phenomenon has been observed quite often in the published literature, though not always [5, 35].

A fourth plausible explanation for the large observed effects is what is known as the "Hawthorne effect" [36] – that is, the special attention paid to MV schools and students (and staff and parents) by BJS staff could have produced some or all of the effect. Most MV teachers were assigned to only one or two schools (depending on the size of the school), and their time was dedicated to delivering the MV programme, interacting with the principal and teachers to ensure that MV values were continued throughout the school day, and interacting with parents to communicate the MV values to them. These were all very special and novel activities that occurred in MV schools and not in comparison schools.

The initial Hawthorne effect could also help explain why the effects after 3 years of the MV programme are no larger than the effects after 2 years. It may be that the novelty effect has worn off after 2 years, and additional years of intervention do not increase the size of the effect. For MV teachers, it may be that their teaching becomes rote after 2 years.

Another possible explanation is that the training of MV teachers was improved over time. The first wave of MV teachers received only 10-15 days of training; most Ashti MV teachers received around 60 days [1]. Thus, MV teacher training had improved by the time Ashti teachers were trained. Results from the process data, where Ashti teachers were more satisfied with the training (and had more positive attitudes about MV in general), support the possibility that improved training might have led to improved and faster effects in Ashti compared to Patoda. ***This possibility could be investigated further by merging MV teacher data and MV training scores with student data***.

For some students, the "wear-out" might even turn into resentment about being told how to behave – and this might explain the smaller effects for Standard III and IV students after 3 years of the programme. However, we also need to be cautious in our interpretation of the interactions of exposure with class. After so many statistical tests, there is a strong possibility that some of the observed differences were due to chance.

In most recent studies in developed countries, particularly in the United States, there is no such thing as a pure "no-treatment" comparison or control group [34]. Almost all schools have some kind or level of health promotion, social-emotional learning, character development or values education. This cuts the possible effect size on the bottom end by 20-50%. In addition, programmes are rarely implemented with the regularity and integrity that the Mulyavardhan programme appears to have been. Lack of integrity in programme implementation in the US could cut the possible effect size on the top end by 20-50%. Finally, as noted above, the special nature of the Mulyavardhan programme could lead to an increased effect size. Thus, the possible effect sizes in rural Indian schools with dedicated teachers could easily be double those found in the U.S.

Unfortunately, we did not have access to all of the data necessary to check the suppositions in the above paragraph. Nevertheless, process data did show that ***both students and MV teachers liked the Mulyavardhan programme a lot***, and personal communications suggest that ***MV teachers delivered it with high integrity and that little, if any, values education occurred in the comparison schools***. Thus, is some ways, the large effects observed in this study are in line with what might be expected given our knowledge of such interventions internationally.

Conclusions

Despite the difficulty of attributing cause, the findings of this evaluation make it likely that the MV programme has large effects. Most of the effects were equally large for boys and girls, for students in different classes, and in different kinds of villages. Regarding classes, there was some suggestion that effects were smaller for older students, but this was an inconsistent finding and probably not present in Ashti schools.

Another very clear finding was that 3 years of the Mulyavardhan programme in Patoda schools produced effects no larger than 2 years of the programme in Ashti schools. We speculated about multiple possible reasons for this.

BJS should be aware that the large effects observed in this evaluation are possibly overestimates of the true effects of Mulyavardhan – and should wait for the results of the randomized controlled trial in Kaij before making too much of these results. The size of the effects observed in this study do make it clear that 35 pairs of schools will provide more than adequate statistical power to detect effects in the RCT, and even to explore more statistical interactions of the conditions under which MV works, and for whom.

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Appendices - Sample Surveys

Student Survey – Kaij Standards III/IV

Parent Survey – Kaij

MV Teacher and Government Teacher and Principal Survey – Kaij

MV Teacher Process Survey – Ashti and Patoda only

MV Teacher Survey – About the Village – Ashti and Patoda only

Student Code_____

School Code_____Students Name_____

This survey is for standards 3rd and 4th. It is to be administered by reading it aloud to the whole class. The Mulyavardhan [MV] teacher other than the one teaching the given class should administer the survey. This is to ensure that students feel confident that their answers are confidential – that not even their Mulyavardhan teacher(s) will see them.

Two MV teachers will be required to administer the survey, one to read it aloud, and one to supervise the administering. The supervisor should move around the classroom and make sure that every student understands the instructions and the wording of each item, and is filling in their answers correctly.

Upon completion, surveys should be collected and placed into a sealed envelope and taken away by the survey administrator(s).

Whole survey to be read aloud to students

Procedure for reading aloud the survey to students:

1. Hello, we are going to have a new activity today. We are going to complete a survey. It is like a test, but it is **NOT** a test. We are interested in knowing how you feel and what you think, not what you know.
2. We want you to do this survey because we think that you can help us make Mulyavardhan a better program. We are trying to learn more about how you and your classmates feel about yourselves and school. We are also interested in what you think about things like fighting or helping someone.
3. Do not write your name anywhere on the survey. Do not tell other kids your answers.
4. Ask right now if you have any questions. I will answer your questions before proceeding further.
5. I will read you the questions. You just tick in the column that is **most true for you**.
6. Mulyavardhan teacher conducting the survey will use blackboard to explain the following instructions:
    - If you never do or feel the way mentioned in the question, tick in the first column
    - If you sometimes do or feel it, tick in the second column
    - If you always do or feel it, tick in the last column
    - To change your answer, please cross out the wrong choice and then tick the correct one.
7. Please answer all the questions. Give honest answers. No one will know what you answered.
8. MV teacher will read aloud each question twice and answer any query from the students.
9. OK, let's get started. Please write your Student ID and name (given by your MV Teacher) in the space provided at the beginning of the questionnaire.
10. Open the first page of the booklet given to you.
11. Let us do some practice questions to understand the answering style.

Student Code_____

School Code_____Students Name_____

Sr.#	Background Information of the student Please answer in the correct box				
1.	Are you a boy or a girl?	**Boy**		**Girl**	
2.	What class are you in?	**3rd**		**4th**	
3.	How old are you?		**Years**		

Practice Questions

Sr.#	Questions	Never	Some Times	Most of the times	Always
1.	I like to play with toys.				
2.	I like to watch the news on T.V				

Student Code_____

School Code_____Students Name_____

SECTION: 1

Sr.#	DO YOU AGREE with the following statements about YOU?	Disagree A LOT	Disagree a little	Agree a little	Agree A LOT
1.	I play nicely with others.				
2.	I do things that are good for the group.				
3.	I treat my friends the way I like to be treated.				
4.	I am nice to students who are different (blind/disabled) from me.				
5.	I try to cheer up other students if they are feeling sad.				
6.	I am a good friend to others.				
7.	I have equal regard for both boys and girls.				
8.	I offer help to those in need.				
9.	I do not spit on the road.				
10.	I accept others as they are.				

SECTION: 2

Sr.#	DO YOU AGREE with the following statements about YOU?	Disagree A LOT	Disagree a little	Agree a little	Agree A LOT
1.	I apologize when I have done something wrong.				
2.	I tell the truth when I have done something wrong.				
3.	I tell others the truth.				
4.	I keep promises I make to others.				
5.	I admit my mistakes.				
6.	I do not take anything belonging to others without permission.				

Student Code_____

School Code_____Students Name_____

SECTION: 3

	DO YOU AGREE with the following statements about YOU?	Disagree A LOT	Disagree a little	Agree a little	Agree A LOT
1.	I wait my turn in line patiently.				
2.	I keep my temper when I have an argument with other students.				
3.	I follow the rules even when nobody is watching.				
4.	I ignore other children when they tease me or call me bad.				

SECTION: 4

Sr.#	DO YOU AGREE with the following statements about YOU?	Disagree A LOT	Disagree a little	Agree a little	Agree A LOT
1.	I speak politely to my teacher and other adults at school.				
2.	I obey my teacher and other adults at school.				
3.	I follow the directions of my teacher and other adults at school.				
4.	I listen (without interrupting) to my teacher and other adults at school.				
5.	I follow school rules.				

SECTION: 5

Sr.#	DO YOU AGREE with the following statements about YOU?	Disagree A LOT	Disagree a little	Agree a little	Agree A LOT
1.	I speak politely to my parents.				
2.	I obey my parents.				
3.	I listen (without interrupting) to my parents.				
4.	I follow the rules at home.				

SECTION: 6

Sr.#	**How does this make you feel?** Think about how YOU feel, or would feel when these things happen to you. **Remember, your answers are private and no one will know how you answered.**	**YES**	**SOME TIMES**	**NO**
1.	When I'm mean to someone, I usually feel bad about it later.			
2.	I'm happy when the teacher says my friend did a good job.			
3.	I understand how other students feel.			
4.	I would feel bad if my mother's friend got sick.			
5.	I would enjoy stepping on an ant hill to watch the ants run around.			
6.	When I see someone who is happy, I feel happy too.			
7.	I feel happy to feed dogs visiting my home in the village.			
8.	I would feel good if the student sitting next to me got in trouble.			
9.	I feel sorry for students who can't find anyone to go around with.			
10.	Seeing an animal get hurt makes me feel sad for him.			
11.	If two students are fighting, someone should stop it.			
12.	I would be upset on seeing a student hitting a bird with an air gun/'gulel'			

SECTION: 7

Sr.#	Do you do this ?	YES	SOME TIMES	NO
1.	I blame others for my mistakes.			
2.	I leave space around my seat in the classroom untidy.			
3.	I make excuses for avoiding work.			
4.	I lose my belongings.			
5.	I leave rubbish on the ground.			
6.	I follow school rules.			
7.	I listen to teacher attentively to understand the lessons in the class.			
8.	I daily do home work given by the teacher.			
9.	I try to do the given task at the given time, on my own.			

SECTION: 8

Sr.#	DO YOU AGREE with the following statements about YOU?	Disagree A LOT	Disagree a little	Agree a little	Agree A LOT
1.	I clean my teeth daily.				
2.	I eat mid-meals provided at the school daily.				
3.	I wash my hands before eating food.				
4.	I wash my hands after going to the toilet.				
5.	I clip my nails of hands and feet regularly.				
6.	I take bath daily.				
7.	I keep my personal belongings at proper place.				
8.	I use water carefully.				

SECTION: 9

Sr.#	What do you believe about the following actions?	Really wrong	Sort of wrong	Sort of OK	Perfectly OK
1.	It is wrong to hit other people.				
2.	If you're angry, it is OK to say mean things to other people.				
3.	It is OK to shout at others and say bad things.				
4.	It is OK to push other people around if you're angry.				
5.	It is wrong to insult (that is put down or make fun of) other people.				
6.	It is wrong to take it out on others by saying mean things when you're angry.				
7.	It is wrong to get into physical fights with others.				
8.	It is OK to take your anger out on others by using physical force.				

SECTION: 10

Sr.#	Please, report on your behavior in the last two weeks. *Remember, your answers are private and no one will know how you answered.*	Never	Once or twice	A few times	Many times
1.	I teased a fellow student at school.				
2.	I pushed (to make him fall) a fellow student from school.				
3.	I called a student at school a bad name.				
4.	I told my friends that I would hit a particular student at school as and when I get a chance.				
5.	I made up something about some students to make others not like them anymore.				

SECTION: 11

Suppose you put your pencil down for a minute and a boy in your class comes along and takes it. **You ask him to give it back, but he says "no." What would you do next? (PART-1)**	**Tick ONE of the given actions**	What if that (what you just picked in PART-1) didn't work? **What would you do then? (PART-2)**	**Tick ONE of the given actions**
Take the pencil away from him.		Take the pencil away from him.	
Tell him that you really need your pencil to finish your work.		Ask the teacher to make him give it back.	
Ask the teacher to make him give it back.		Help him try to find another pencil, or tell him he can use yours after you are finished with it.	
Help him try to find another pencil, or tell him he can use yours after you are finished with it.		Tell him that you will hit him or take something of his if he doesn't give back your pencil.	
Tell him that you will hit him or take something of his if he doesn't give back your pencil.		Find another pencil for yourself.	

SECTION: 12

Sr.#	DO YOU AGREE with the following statements about YOU?	Disagree A LOT	Disagree a little	Agree a little	Agree A LOT
1.	I can always cheer up someone who is feeling sad.				
2.	I listen carefully to what other people say to me.				
3.	I'm good at taking turns, and sharing things with others.				
4.	I'm very good at working/studying with other children.				
5.	I'm not very good at helping people.				

Student Code_____

School Code_____Students Name_____

SECTION: 13

Sr.#	DO YOU AGREE with the following statements about YOU?	Disagree A LOT	Disagree a little	Agree a little	Agree A LOT
1.	I like my school.				
2.	I wish I didn't have to go to school. I				
3.	I wish I could go to a different school. I				
4.	I'm bored in school. I				
5.	I am glad to get back to school after summer vacation.				
6.	I would be very sad if I had to go to a different school.				
7.	I hate being in school.				

SECTION: 14

Sr.#	DO YOU AGREE with the following statements about YOU?	Disagree A LOT	Disagree a little	Agree a little	Agree A LOT
1.	The students in the school make fun of me.				
2.	My peers in school tease me or call me names.				
3.	The other students take my things without asking.				
4.	My peers look after school property.				
5.	My peers put rubbish in the bin.				
6.	The students of my class do what the teachers ask.				
7.	My peers threaten other students.				
8.	The students in the school break school rules.				
9.	My peers fight in the classroom or playground.				

Student Code_____

School Code_____Students Name_____

SECTION: 15

Sr.#	DO YOU AGREE with the following statements about YOU?	Disagree A LOT	Disagree a little	Agree a little	Agree A LOT
1.	I try hard to do well in school.				
2.	In class, I work as hard as I can.				
3.	I pay attention in class.				
4.	I am not keen to learn new things.				
5.	When I am in class, I listen very carefully.				
6.	I ask questions about things I see around.				

SECTION: 16

DO YOU AGREE with the following statements?		Disagree A LOT	Disagree a little	Agree a little	Agree a LOT
1.	I like myself just the way I am.				
2.	I wish I were different from the way I am.				
3.	I am happy with myself.				
4.	I like myself.				
5.	I cannot remain alone at home in the night.				
6.	I can tell about my likes and dislikes.				
7.	I seek to improve myself.				

OK, THAT'S IT.

THANK YOU VERY MUCH for working so hard to answering all these questions.
Please hand in your survey to your teacher.

HAVE A VERY HAPPY DAY!

This survey is meant for parents to answer as part of a broader evaluation of impacts of the *Mulyavardhan* program.

MV Teacher conducts the parent survey.

1. School Code: _____

2. Student Name: _____

3. Student Code: _____

Student: Boy _____ Girl_____ Standard_____

4. What is your (caretaker) relationship to this child:

Mother:____ Father:_____ Grandmother:___ Grandfather:____ Aunt/Uncle:____

5. Care-taker Name:_____Male_____Female_____

6. Tick the highest level of schooling that you (Care-taker) completed?

a. Never been to school_____
b. Less than 8th grade_____
c. Some High School_____
d. High School Graduate_____
e. Some College_____
f. College Graduate_____
g. Some Post-Graduate _____
h. Post-Graduate Degree_____

4. How many adults (over 18 years) live in your home?_____

5. How many children do you have in total?_____

Questionnaire for which student?

Student Code:_____

Standard:_____

	A. Here is a detailed list of behaviors that your child may or may not do. How much do you think this child does of the following:	Never	Rarely	Some times	Often	Always
1.	Learns new things in school?					
2.	Works hard in school?					
3.	Admits his/her mistakes?					
4	Respects others?					
5.	Uses his/her time well?					
6.	Is the best s/he can be?					
7.	Gets into fights?					
8.	Is nice to others?					
9.	Tells stories learnt in MV classes to others at home?					
10.	Make him/herself into a better person?					
11.	Thinks about how others feel?					
Sr. No.	**B. How much do you think this child does of the following:**	Never	Rarely	Some times	Often	Always
1.	Keeps promises s/he makes to others?					
2.	Feels good about who s/he is (rich or poor)?					
3.	Feels good when s/he does good things?					
4.	Feels bad when s/he does bad things?					
5.	Keeps him/herself clean?					
6.	Keeps surroundings clean?					
7.	Likes going to school?					
8.	Has faith in himself?					
9.	Is interested in learning lessons?					
10.	Takes out anger on others by hitting them?					
11.	Treats others the way s/he likes to be treated?					
12.	Finds fights ok in anger situation?					
13.	Takes/steals things from people?					
14.	Tries new things?					
15.	Controls his/her negative feelings?					
16.	Helps others.					

17.	Blames others for her/his mistakes?					
C.	**Do you think your child has ever done any of the following:**		**Definitely NOT**	**Probably NOT**	**Probably YES**	**Definitely YES**
1.	Pushed a smaller child around?					
2.	Injured someone badly on purpose?					
3.	Shared one of his/her things or books with a friend?					
4.	Stopped someone from drinking liquor?					
5.	Stopped someone from smoking tobacco/'beedi'/cigarette?					
6.	Stopped someone from hitting an animal?					
7.	Stopped someone from throwing garbage at an inappropriate place?					
8.	Stopped someone from cutting a tree?					
9.	Returning the found article?					
D.	**How often do you talk with your child about:**	Never	Rarely	Some times	Often	Always
1.	How he/she is doing in school?					
2.	His/her work plan for the day?					
3.	How he/she feels?					
E.	**How much of the time:**	Never	Rarely	Some times	Often	Always
1.	Do you know what your child is doing when he/she is not at home or in school?					
F.	**How much of the time:**	Never	Rarely	Some times	Often	Always
1.	Do you praise your child when he/she does a good job at something?					
2.	Do you take it kindly when he stops someone from smoking/drinking liquor/cutting a tree/hitting an animal?					
3.	Do you pay attention when he stops someone (father/grandfather) from smoking/drinking liquor/cutting a tree/hitting an animal?					
4.	Do you think 'stopping' incidences led someone (father/grandfather) to refrain from smoking/drinking liquor/cutting a tree/hitting an animal?					
Please check that every question is answered by the parent/caretaker and that you completed the Survey for each child in the family attending Mulyavardhan Program at this village School.						
Thank you so much!!!						

Name and Signature of the Mulyavardhan Guide:_____

SURVEY: Principal Teacher MV Teacher | **March 2012**

School ID#_____Village Name_____Tehsil _____

We request you to participate in 'Mulyavardhan' Evaluation Project by filling this survey.

- This is a survey about what you think of students of your School/Class
- This is NOT a test.
- There is no right or wrong answers.
- We are interested in your opinions and feelings.
- Please use a black or dark blue pen to write your answer.
- To change your answer, please cross out the wrong and then tick the correct one.
- Please answer each question as honestly as you can.
- Your answers are completely confidential.

1. Class in charge of (if applicable): _____Standard.

2. State whether you are: Male_____Female_____.

A. Please rate how much you agree or disagree with the following statements:		**Strongly Disagree**	**Disagree**	**Can't Say**	**Strongly Agree**	**Agree**
1	The way we think of ourselves impacts everything we do for ourselves and others.					
2	It is important to spend time creating a peaceful climate in schools.					
3	Students feel better about themselves when they act in disciplined, responsible, honest & peaceful ways.					
4	Creating a peaceful learning environment in the school is a waste of teachers' time.					
5	Schools and parents have equal responsibility to impart moral and value education to children.					
6	Students behave better if they feel good about themselves.					
7	Students learn better if they are at peace with themselves.					
8	Morals and values should be taught at home, not in school.					
9	'When you treat others as you wish you be treated by others' always helps you to think of					

	positive actions.					
10	When you treat others badly you tend to be upset inside (lose your inner peace).					
B. **Do the following behaviors of a student affect their ability to learn?**		**Never**	**Rarely**	**Often**	**Some times**	**Always**
1	Feeling good about the self					
2	Being helpful to others					
3	Feeling confident about the self					
4	Behaving positively towards others					
5	Behaving respectfully to elders					
6	Treating others the way one would like to be treated					
7	Having control on negative emotions					
8	Being honest					
9	Being in good physical health					
10	Having good thinking skills					
11	Being able to manage their thoughts and feelings					
12	Having good social skills					
13	Having good inter-personal skills					
14	Being able to cooperate in a group.					
15	Being able to take responsibility for ones learning.					
16	Being able to make friends with children from all walks of life.					
17	Being responsible for ones actions					
18	Having control on anger					
19	Observing school rules.					
20	Being polite and respectful to elders.					
C. In your opinion how much RESPONSIBILITY should schools have in teaching students the following:		**Never**	**Rarely**	**Often**	**Some times**	**Always**
1	Feeling good about one self					
2	Being thoughtful of others feelings					
3	Behaving positively towards self &others					
4	Treating others the way they would like to be treated					
5	Control on one's negative emotions					
6	To talk politely to teachers and other adults					
7	Good personal hygiene					
8	Being able to resolve interpersonal conflicts					

9	Responsibility for one's actions					
10	Skills to get along with others					
11	Empathetic behavior					
12	Honest behavior					
13	Talking respectfully					
14	Positive actions for the care of the environment					
15	Interpersonal skills					
16	Morals and values					
D. Did you ever discuss formally or informally the following topics with students of your school/class this year…?		**None of The time**	**Yes One time**	**Yes A few times**	**Yes Many times**	
1	Smoking or tobacco use.					
2	Alcohol use.					
3	Violence and its consequences.					
4	Helping others.					
5	Being nice to others.					
6	Doing good things for care of the environment.					

Part-E

SECTION: 01 [Pro social Behavior]

Sr.#	How many students in your School/Class behave as mentioned in the following statements……	None [0%]	Very few [5%]	A few [10%]	Some of them [25%]	Quite A number [50%]	A large number [75%]	All of them [100%]
1.	Play nicely with others.							
2.	Do things that are good for the group.							
3.	Treat their friends the way they like to be treated.							
4.	Are nice to other students who are different from them.							
5.	Try to cheer up when others feeling sad.							
6.	Are good friends to each other?							

SECTION: 02 [Honesty]

Sr.#	How many students in your School/Class behave as mentioned in the following statements……	None [0%]	Very few [5%]	A few [10%]	Some of them [25%]	Quite A number [50%]	A large number [75%]	All of them [100%]
1.	Apologize when they have done something wrong.							
2.	Tell the truth when they have done something wrong.							
3.	Tell others the truth.							
4.	Keep promises made to others.							
5.	Admit mistakes.							
Write below your specific text comments (if any):								

SECTION: 03 [Self Control]

Sr.#	How many students in your School/Class behave as mentioned in the following statements……	None [0%]	Very few [5%]	A few [10%]	Some of them [25%]	Quite A number [50%]	A large number [75%]	All of them [100%]
1.	Wait for their turn in line patiently during play/work.							
2.	Control temper when they have an argument with other students.							
3.	Follow the rules even when nobody is watching them.							
4.	Ignore other children when they tease or call bad names.							
Write below your specific text comments (if any):								

SECTION: 04 [Respect to Teachers]

Sr.#	How many students in your School/Class behave as mentioned in the following statements……	None [0%]	Very few [5%]	A few [10%]	Some of them [25%]	Quite A number [50%]	A large number [75%]	All of them [100%]
1.	Speak politely to the teachers and other adults at school.							
2.	Obey the teachers and other adults at school.							
3.	Follow the directions of the teachers and other adults at school.							
4.	Listen (without interrupting) to the teachers and other adults at school.							
5.	Follow school rules.							

Write below your specific text comments (if any):

SECTION: 05 [Empathetic Behavior)

Sr.#	How many students in your School/Class behave as mentioned in the following statements……	None [0%]	Very few [5%]	A few [10%]	Some of them [25%]	Quite A number [50%]	A large number [75%]	All of them [100%]
1.	When mean to someone, usually feel bad about it later.							
2.	Feel happy when the teacher praises their friends for having done a good job.							
3.	Understand how other students feel.							

Write below your specific text comments (if any):

SECTION: 06 [Personal Responsibility]

Sr.#	How many students in your School/Class behave as mentioned in the following statements……	None [0%]	Very few [5%]	A few [10%]	Some of them [25%]	Quite A number [50%]	A large number [75%]	All of them [100%]
1.	Blame others for their mistakes.							
2.	Leave space around their seats in the classroom untidy.							
3.	Make excuses for avoiding study/work.							
4.	Lose their belongings.							
5.	Leave rubbish on the ground.							
6.	Follow school rules.							

Write below your specific text comments (if any):

SECTION: 07 [Personal Hygiene]

Sr.#	How many students in your School/Class behave as mentioned in the following statements……	None [0%]	Very few [5%]	A few [10%]	Some of them [25%]	Quite A number [50%]	A large number [75%]	All of them [100%]
1.	Clean teeth daily.							
2.	Eat mid-meals provided at the school daily.							
3.	Wash hands before eating food.							
4.	Clip nails of hands and feet regularly.							
5.	Bathe daily.							

Write below your specific text comments (if any):

SECTION: 08 (Beliefs about Aggression & Aggressive Behavior)

Sr.#	F. How many students, do you think, in your School/Class believe that……..	None [0%]	Very few [5%]	A few [10%]	Some of them [25%]	Quite a number [50%]	A large number [75%]	All of them [100%]
1.	It is wrong to hit other people.							
2.	When one is angry, it is OK to say mean things to other people.							
3.	It is OK to shout at others and say bad things.							
4.	It is OK to push other people around if you're angry.							
5.	It is wrong to insult (that is put down or make fun of) others.							
6.	It is wrong to take it out on others by saying mean things when angry.							
7.	It is wrong to get into physical fights with others.							
8.	It is OK to take your anger out on others by using physical force.							
Write below your specific text comments (if any):								

SECTION: 09 [Aggression]

Sr.#	G. Please, report students' behavior in your School/Class in the last two weeks.	Never	Once or twice	A few times	Many times
1.	Teased a fellow student at school.				
2.	Pushed or hit a fellow student from school.				
3.	Called bad names to a student at school.				
4.	Made up something about some students to make others not like them anymore.				
Write below your specific text comments (if any):					

SECTION: 10 [Conflict Resolution]

Sr.#	Suppose a student in your **School/Class** puts his/her pencil down for a minute and another boy/girl in the class comes along and takes it. **Student asks him to give it back, but he says "no." How many students in your class WOULD react in the following ways…….**	**None [0%]**	**Very few [5%]**	**A few [10%]**	**Some of them [25%]**	**Quite a number [50%]**	**A large number [75%]**	**All of them [100%]**
1.	Snatch the pencil away from him.							
2.	Tell him/her that you really need your pencil to finish your work.							
3.	Ask the teacher to make him/her give it back							
4.	Help him try to find another pencil, or tell him he can use yours after you are finished with it.							
5.	Tell him that you will hit him or take something of his if he doesn't give back your pencil.							
6.	Find another pencil for him/her.							
Write below your specific text comments (if any):								

SECTION: 11 [Interpersonal Skills]

Sr.#	**How many students in your School/Class behave as mentioned in the following statements……**	**None [0%]**	**Very few [5%]**	**A few [10%]**	**Some of them [25%]**	**Quite A number [50%]**	**A large number [75%]**	**All of them [100%]**
1.	Can always cheer up someone who is feeling sad.							
2.	Listen carefully to what other people say.							
3.	Are good at taking turns, and sharing things with others.							
4.	Are very good at working with other children.							
5.	Are not very good at helping people.							
Write below your specific text comments (if any):								

SECTION: 12[Liking for School]

Sr.#	How many students in your School/Class behave as mentioned in the following statements……	None [0%]	Very few [5%]	A few [10%]	Some of them [25%]	Quite A number [50%]	A large number [75%]	All of them [100%]
1.	Like the school.							
2.	Wish they didn't have to go to school.							
3.	Are bored in school.							
4.	Are glad to get back to school after summer vacation.							
5.	Would be very sad if they had to go to a different school.							
6.	Hate being in school.							
Write below your specific text comments (if any):								

SECTION: 13 [School Climate]

Sr.#	How many students in your School/Class behave as mentioned in the following statements……	None [0%]	Very few [5%]	A few [10%]	Some of them [25%]	Quite A number [50%]	A large number [75%]	All of them [100%]
1.	Make fun of others.							
2.	Tease or call names to others.							
3.	Take others things without asking.							
4.	Look after school property.							
5.	Put rubbish in the bin.							
6.	Do what the teachers ask.							
7.	Threaten other students.							
8.	Break School rules.							
9.	Fight in the classroom or playground.							
Write below your specific text comments (if any):								

SECTION: 14(Engagement with learning)

Sr.#	How many students in your School/Class behave as mentioned in the following statements……	None [0%]	Very few [5%]	A few [10%]	Some of them [25%]	Quite A number [50%]	A large number [75%]	All of them [100%]
1.	Try hard to do well in school.							
2.	Pay attention in class.							
3.	Not keen to learn new things.							
4.	Listen very carefully in class.							
Write below your specific text comments (if any):								

SECTION: 15(General Self Esteem)

Sr.#	How many students in your School/Class behave as mentioned in the following statements……	None [0%]	Very few [5%]	A few [10%]	Some of them [25%]	Quite A number [50%]	A large number [75%]	All of them [100%]
1.	Like themselves just the way they are.							
2.	Daily do home work given by the teacher.							
3.	Happy with him/herself.							
4.	Have faith in him/herself.							
Write below your specific text comments (if any):								

Part-F **SECTION: 16**

Sr.#	For the following items, please use the given scale:	1-2 years	3-5 years	6-10 years	11-20 years	21 or more years
1.	How many years at this school?					
2.	Your Name (Optional)					

MULYAVARDHAN PROCESS SURVEY (MVTPS) | MV TEACHER | **March 2012**

- This is a short survey about the Mulyavardhan program.
- **This is NOT a test.**
- There is no right or wrong answers.
- We are interested in your opinions and feelings.
- Please answer each question honestly about how you feel.
- **Your answers are secret.**
- **TICK carefully & neatly in the SQUARE for the answer that is best for you with a blue ballpoint pen.** If you make a mistake, to change your answer, cross out the wrong choice like this (X) and then tick the correct one.

First, please write in your Full **Name**

_____

A. The following questions concern the Mulyavardhan program.		Strongly Disagree	Disagree	Agree	Strongly Agree
1	I believe in the goals and objectives of Mulyavardhan.				
2	MV is a valuable program for students.				
3	The time required by Mulyavardhan [MV] is well worth as it has improved student behavior.				
4	Mulyavardhan [MV] is valuable for easier classroom management.				
5	The more effort put into MV the more effective it is.				
6	MV lesson plans are clear and well prepared.				
7	I benefit personally from teaching MV.				
8	My respect in the community has risen by my being a MV teacher.				
9	The negative traits in me have reduced since my association with MV.				

B. Here are some questions about the training you received for the teaching of the Mulyavardhan program.		Strongly Disagree	Disagree	Agree	Strongly Agree
1	I think that the 60 days period of Mulyavardhan subject training and induction is sufficient.				
2	I found the inputs provided for 'working with the school principal' useful.				
3	I found the inputs given for 'working with teachers' useful.				
4	The 30 days of 'on-the-job' training was useful.				
5	The teaching and learning situations discussed in the training were very different from what I experienced when I started delivering the Mulyavardhan in cla88ssroom settings.				
6	The topic 'creation of families, social and cultural activities' was covered adequately in the initial (60 days) training.				
7	The topic 'cooperative games, theory and practice' covered in the initial (60 days) training enabled me to deliver Mulyavardhan sessions effectively.				
8	The topic 'theory of peace and value education from Mulyavardhan introduction' covered in the initial (60 days) training enabled me to deliver the Mulyavardhan sessions effectively.				
9	The topic 'sponge activity' covered in the initial (60 days) training enabled me to deliver the Mulyavardhan sessions effectively.				
10	I often use the 'story-telling skills' that were taught during the initial (60 days) training.				
11	I found the 'classroom discipline and management' skills covered during the initial (60 days) training				

	useful for managing my class.				
12	I often use the 'blackboard work' techniques that I learnt in the initial (60 days) training.				
13	I do not use the methods for 'observing children and evaluating the progress of the program' that were suggested in the initial (60 days) training.				
14	I have used the 'anti-dropout campaign' techniques with children in my class.				
15	The Mulyavardhan Guide training I received was very useful for me to be an effective MV Teacher.				
C. How often do your *Mulyavardhan* sessions include the following?		**Not at all**	**A little**	**Some**	**A lot**
1	Role Plays				
2	Whole class discussions				
3	Lectures				
4	Small group work				
5	Working in Pairs				
6	Art and Craft				
7	Presentation by students				
8	Individual activity				
9	Cooperative games				
10	Sponge activity				
11	Songs				
12	Story telling				

D. How much interested are your students in each type of the following activity?		**Not at all**	**A little**	**Some**	**A lot**
1	Role Plays				
2	Whole class discussions				
3	Lectures				
4	Small group work				
5	Working in Pairs				
6	Art and Craft				
7	Presentation by students				
8	Individual activity				
9	Cooperative games				
10	Sponge activity				
11	Songs				
12	Story telling				
E. How much are you satisfied with the following aspects of the *Mulyavardhan program* ?		**Not at all**	**A little**	**Some**	**A lot**
1	Training				
2	Monitoring				
3	Administration				
4	Follow up				

F. How much did you:		Never	Some-times	Often	Always
1	Share student success stories when talking to parents?				
2	Emphasize to parents the importance and benefits of reinforcing their children's good behavior?				
3	Invite parents to special MV school events?				

4 Describe the major change you have noticed/experienced in yourself since training and practising Mulyavardhan in the school.

5. Briefly describe your most positive experience in relation to deliverance of the Mulyavardhan program by you in the school.

6. Briefly describe your most negative experience in relation to deliverance of the Mulyavardhan programme by you in the school.

THANK YOU VERY MUCH for working hard answering these questions.

Please hand your survey to the coordinator.

Name of the MV Teacher_____

	NAME of this VILLAGE: _____ **About this village**. …….. By this village, we mean the area surrounding your school where the children who attend your school live. The following questions ask about resources, facilities, problems, and characteristics of this village.	Strongly Disagree	Disagree	Agree	Strongly agree
1	This is a close-knit neighborhood.				
2	People know each other.				
3	There is a good sense of community.				
4	There is easy availability of Paan &Beedi.				
5	There is drinking in public.				
6	Families tend to live here for a long time.				
7	Families tend to migrate seasonally for economic reasons.				
8	There is high consumption of liquor.				
9	There is lot of domestic violence.				
10	People use abusive language in public.				
11	Most of the families suffer due high consumption of liquor.				
12	Families are interested in the education of their children.				
13	Most of the families spend on celebrations of festivals beyond their means.				
14	Most of the families spend on marriages of their sons /daughters beyond their means.				
15	Most of the families are poor.				
16	Most of the families do not have a stable source of income.				
17	Most of the people are functionally literate i.e., can read and write.				
18	Most of the parents use verbal abuse to discipline their children.				
19	Most of the families prefer sons over daughters.				
20	Most of the families possess arable land.				
21	Family land holdings are not large.				

About this village…….		Strongly Disagree	Disagree	Agree	Strongly agree
22	Family income from land is not sufficient for sustenance.				
23	Family income is supplicated by doing other jobs.				
24	Most of the families have a television set.				
25	Very few families own a four wheeler.				
26	Bicycle is the commonest means of transport.				
27	Condition of the Road-link to the main road remains bad almost throughout the year.				
28	Electric supply to the village is not steady.				
29	The Road-link to the main road is not metalled or done with coal-tar.				
30	Most of the families use mobile phones.				
31	A Few families have computer/laptop.				
32	Internet facilities are available in the village.				
33	Health facilities are available in the village.				
34	Bank facilities are available in the village.				
35	Post-office facilities are available in the village.				
36	Water is drawn from the wells.				
37	There is acute water scarcity during summers.				
38	Electric fans are usually used in homes during summers.				
39	The local technology and material is used in construction of the houses.				
40	Most of the homes have not more than two rooms.				
41	There is lot of crime.				
42	Houses are well maintained.				
43	Vandalism (defacement of Govt. or private property) is a problem.				